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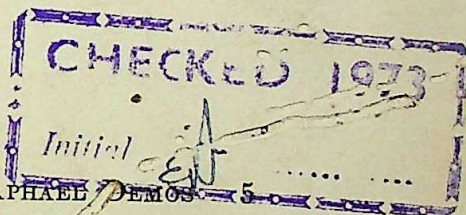
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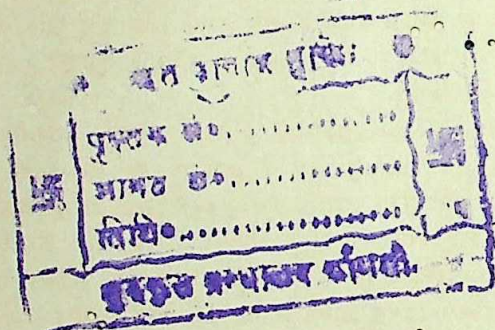
**THE JOURNAL
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**EDITED BY
FREDERICK J. E. WOODBRIDGE,
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THE JOURNAL OF PHILOSOPHY

THE CONCEPTION OF DERIVATION IN EPISTEMOLOGY

IN this article I propose to make certain distinctions in the notion of derivation as applied to knowledge. The traditional employment of this notion has been confused, and though the points I will make are rather elementary, they are perhaps useful, at any rate for the beginner in the field.

When, in studying the philosophical classics, we come upon discussions whether ideas are innate, or *a priori*, or derived from experience, or based on authority, or received from inspiration—all of which are discussions concerning derivation—we find that at least three possible meanings may be covered by these terms. In the first place, derivation may mean the *logical basis* of a belief, as when we ask if a proposition is *a priori* or not; this is a question concerning the *grounds* upon which a belief may be accepted, and more specifically, whether these grounds are intrinsic or extrinsic. I will call this “logical derivation.” In the second place, we may be referring to the biological origin of an idea;¹ we may be asking ourselves: is this idea native to the mind or not, is it innate or acquired? We are not debating the logical justification of a belief, e.g., whether it is self-evident or not; we are asking, is man born with this belief or does he somehow get it during his lifetime? In brief, this is a question whether an idea is intrinsic to the individual or not. And I will distinguish this sense by calling it “biological derivation.” And in the third place, by derivation we may mean *mental causation*. In asking whence a certain conception was acquired we may mean what suggested it to the mind, what brought it forward, what persuaded us to adopt it, whether it was emotion, or prejudice, or reason, etc. These are questions as to the psychological mechanism through which an idea happens in on the mind or is adopted by it. The question about a given idea would be whether it is derived or underived, whether it has a verifiable cause in consciousness or whether it has appeared on the scene quite unheralded, as though by a flash. And this use of the term I will call “psychological derivation.”

In sum, we have three pairs of opposites, each defined by ref-

¹ I am using the term “idea” to designate conceptions and beliefs in differently.

erence to primitiveness: self-evidence as against inferential truth; innateness as against ideas which we acquire; simplicity as against complexity in the psychological sense. I should like to insist that the three phrases—logical, Biological, and psychological derivation—do not signify mutually exclusive species of one and the same genus, but express three different standpoints from which the question of derivation has been approached. In their consequences, these may overlap; at the same time, as they are distinct, there is no reason why an idea which is primitive from one standpoint need be primitive from either of the other two. Roughly speaking the first phrase signifies the “ground” of an idea, the second the “origin,” and the third the “cause.” Yet in the history of thought, the three meanings have been jumbled together, especially the first with the second. Thus, the phrase “*a priori*” has been employed to mean both logically primitive (self-evident) and biologically primitive or innate. But self-evidence has to do with the validity of a belief whereas innateness has to do with how a belief comes to be lodged in the mind. The two things are different and different terms should be used. There is somewhat greater kinship between biological and psychological derivation, as both concern origination, yet it is obvious that they are distinct. E.g., an innate—and hence biologically primitive—idea would nevertheless be derived in the psychological sense, because it would require the aid of experience for its evocation into consciousness.

Logical Derivation.—This problem belongs to the theory of knowledge *par excellence*, and has been investigated most extensively; I will therefore dwell very briefly upon it. Logical derivation signifies the relation of a belief to the source of its validity; this may lie either in the belief itself—in which case the belief is self-derived or logically primitive—or wholly outside the belief, and then it is a logically dependent belief. In the latter event, we have two alternatives: a belief may derive its validity either from another belief—as happens with beliefs whose truth can be proved by inference—or it may be grounded upon immediate experience, as with perceptual beliefs. A third possibility is for a belief to be based on authority; for authority, too, is an instance of logical derivation. The propositions about the past life of the human race derive their evidence from the statements of historians, and this is the evidence of authority. Thus, the view that Athens was ravaged by a plague during the Peloponnesian War is based upon the History of Thucydides. So again the statement of an expert is a valid basis for belief; when I accept the diagnosis of a doctor, my belief may be said to be rationally grounded, for though I do not know enough to judge his particular verdict, I know enough

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to judge, in a general way, whether the man is an expert or not. In judgments based upon authority—and these perhaps constitute the majority of judgments—there is presupposed an ultimate premise of social credibility—namely, that people don't lie; this premise is the basis of the attitude of trust without which no social life is possible.

We should distinguish between authority in the logical sense and in the psychological sense. The first is a type of evidence, the second is a form of force operating upon the mind, and properly comes under what we have called psychological derivation. An example of the latter is when a man's ideas are due to suggestion or custom or tradition.

Beliefs which are logically primitive are known as "*a priori*"; they provide their own evidence; like Melchisedek, they have no parents, or rather, they are their own intellectual parents. The contrast between primitive and dependent beliefs may be expressed by the statement that whereas the former are internally related to their evidence, the latter are externally related to it. Are there any *a priori* beliefs? According to philosophical tradition (Plato, Descartes, Kant) there are; for example, the principles of logic, of mathematics, and science. In the realm of concepts, Plato held that our abstract ideas are *a priori* and that the relevance of experience was of a psychological character. For Kant, the categories were logically primitive. Are these principles and notions truly primitive in the logical sense? The reader must be familiar with the strong dissent expressed from the empiricist camp; in addition, mathematical logic has recently shown that mathematical principles hitherto regarded as self-evident, like the axiom of parallels, are only suppositions which can be replaced by their opposites. When all is said and done, the attack of the modern mathematical school leaves the question of primitiveness, of a priority, where it was. The point made concerning logical and mathematical propositions is that they are postulates rather than certainties, necessities of thought rather than descriptions of objective truth. But to take them as hypotheses is still to view them as anticipatory of concrete experience; to regard them as definitions useful in the ordering of the material of knowledge is still to consider them as primary attitudes, underived from the material itself. What has happened really is that the conception of logical validity has been replaced by an alternative conception, that of epistemic validity, i.e., validity from the standpoint of cognition rather than from that of objective truth. Consequently, to the various types of derivation presented in this paper, this last one of epistemic validity might be usefully added. The whole question is too important

to be discussed in an incidental fashion; and in this article we are limiting ourselves to the attempt of making issues clear without trying to settle them.

Psychological Derivation.—Psychological derivation concerns the material and efficient causes (in Aristotle's sense) of the idea. The distinction between logical and psychological derivation can be easily illustrated. In the course of a judicial investigation in which the author of a murder is being sought, the police come across a *clue* which enables them to lay their hands on the *evidence*: the evidence is the logical ground, the clue is the psychological cause. In the schoolroom, the teacher of mathematics uses concrete examples in order to make the proofs understood by the student. The examples are a psychological aid for the comprehension of the logical basis. The psychological cause brings about a belief either by suggesting a possibility (as in the case of a clue) or by helping to persuade us to the belief (as in the case of the example). In the field of conceptual apprehension, the psychological factor enters in the shape of imagery, symbolism, and language. Empiricism, if interpreted as a doctrine of the logical derivation of ideas from experience, is open to doubt, but taken as the theory of the psychological origination of ideas from sensation, is probably true. The mind proceeds from the concrete to the abstract; sensation is psychologically prior to thought. The more abstract the idea, the more concrete the symbol it demands. There is a certain contrast between the two orders of logical and of psychological derivation respectively: among propositions, the ones that are logically primitive are those that in the order of knowledge we reach last; conversely we begin with those which are the most complex and involve the greatest number of ancestors. Thus, there seems to exist a law of inverse proportion whereby the more independent a belief in the logical order, the more derived it is in the psychological order, and *vice versa*.

Psychological primitiveness is exemplified in that most important of mental faculties, the imagination, by which ideas appear without any conscious suggestion, as though self-caused. Genius in the field of knowledge is imaginative insight into new theories and conceptions. But ideas must not only be born; they must be baptized before they are admitted into the epistemological community; and intellect is the priest who performs the rite, testing and validating them. In this matter, people have often mistaken psychological for logical primitiveness: a man inspired is liable to take his inspirations as self-evident. Inspiration provides only a possibility, never a certificate of truth; the psychological convincement of an idea expresses its causal force and is no measure of

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its truth-value. Knowledge grows only by a wise harnessing of the imaginative to the logical faculty.

The practical problem arises of how to avoid confusing psychological with logical primitiveness; what are the signs by which to know the one from the other? In fact, there are no certain rules by which to distinguish the perception of truth-value from psychological convincingness; however, time sifts the one from the other; further, the coherence of the new idea with already validated ideas is a useful test.

The inquiry into psychological derivation can be so enlarged as to include the entire field of the mechanism of knowledge. Such an inquiry would be an attempt to answer the question: what is the actual operation of the mind in its cognitive character, and it would consider not how we *should* think, but how we *do* think. The German school have very properly insisted that the psychological approach should be clearly distinguished from the epistemological inquiry; but while agreeing to the distinction we should refrain from inferring that the psychological approach is any the less important for that, or one which the philosopher can afford to neglect. Truth is a value and philosophy is a search for it; philosophy is an art as well as a science—a practical as well as a theoretical activity. And the more the philosopher familiarizes himself with the mechanism of thinking, the better a master he becomes of his instrument, and the greater his hopes of attaining his purpose, which is the apprehension of the truth and the persuading of others of the truth. Nor can strict epistemology completely disinterest itself in this matter. In the main, the problem of the actual mechanism of belief lies outside the territory of epistemological theory, but there is a part in which the two fields overlap. The psychological field involves the question of how we, as we now are and our minds are made, go about in selecting our beliefs. Now, should the actual mechanism of persuasion be faulty by any chance, should intellect be so constructed as to have no necessary connection of any sort with truth, then all our reasonings, all our beliefs, all our philosophies would be wrong, or at least would lack the guarantee of validity. There is what Royce would call a reflective argument here: in some ultimate sense, our actual procedure of belief must be right; otherwise all thought and assertion would be without validity, including the very assertion that the procedure of belief is faulty. We thus have the axiomatic proposition that our mechanism of belief, in its barest and most basic aspect, must lead to the apprehension of truth. To this extent, validity and fact are interdependent, and the epistemological and the psychological inquiries overlap.

The classical philosophers, from Socrates to Spinoza, have depicted the mind as an instrument dominated by the logical factor; further, they have supposed the dominion of reason to extend outside the confines of its house proper, over the whole personality, over feelings and actions as well as over beliefs. To know is to do. One of the most striking reversals in the history of thought is the change which has taken place in recent times in man's attitude toward the power of reason in thought and life. Freud is the leader of the school which utterly denies that reason has any control over desire. The human chariot is driven by impulse and feeling, and reason is a feeble animal tied behind and following meekly. Reason lacks control not only over the emotions, but over its own proper sphere of belief. Parallel with the Freudian doctrine is the view which regards ideas and beliefs as reflections of geographical and economic circumstances, and of class-feelings. This is the doctrine of thought as swayed by the accidents of time and space. Today, the emphasis is on the impotence of reason; our ancestors celebrated the glories of the power of reason. Surely both the classical and the modern views are exaggerated. Mind had been represented in the past as an abstract, formal, impersonal being, beyond the limitations of actuality; and when we realized later that mind was entangled in the web of circumstance and desire, then, by a sort of romantic disillusionment, we went over to the opposite view that mind is not rational at all. If mind is a universal—Aristotle's form of forms—then, it is a universal embedded in a particular, which is the individual person belonging to a certain time and place. Thought is a temporal process, or at any rate, has a vivid temporal aspect, and so is exposed to all the hazards of time and fortune. Mind gazes at reality from an individual perspective, determined not only by one's sensory limitations, but by one's previous beliefs and one's interests. But to say that the universal is embodied in the particular is not to divest it of its character of universality; to say that the mind has a concrete determination is not to deny rationality to it—it is only to indicate how that rational character is canalized and made operative. The special circumstance and the particular perspective are not ending-points, but starting-points for the quest of truth. Of course, the union of the universal and the particular is not achieved in a simple manner; the two are in a state of constant tension and consequently there is the risk that the personal, circumstantial element may distort or confine the mind. When this happens—and it often does, since mind is exposed to disease in the same way as any other living being—we have the phenomena on which the Freudian school dwell.

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Biological Derivation.—We are all familiar with the contrast of innate vs. acquired ideas, but the following distinctions will help make the conception clearer. To say that a belief is acquired does not mean that it comes from experience of the physical world; it may be derived from introspection. More generally, an idea is not acquired in the sense that it comes from "outside," nor is an idea innate in the sense that it comes from "within." To suppose this, would be to work on a naïve picture of the mind as a self-contained bit of substance with its own "inside" and to which reality is "external." Now, it is not necessary to assume such a view in order to define the notion of biological derivation. Much more probable is the view that the mind is organically related to its environment; if so, the mind exists outside, among the world, and the world is inside, within the mind. In short, the separation of the world from the mind which a definition of experience as the contact of mind with an external world would presuppose, is improbable and quite gratuitous for our purposes.

We will thus limit ourselves to the assertion that an idea is innate in the sense that it is intrinsic to human nature, part of man's natural equipment, whereas an acquired idea is part of human history. The contrast of innate and acquired is one between *nature* and *habit*. But here again we must refrain from assuming more than is necessary. (a) Innate knowledge is necessarily neither inherited experience as Spencer held nor (b) due to experience by the same individual in a previous supramundane life, as Plato held. The question as to how ideas come to be innate does not belong to this stage of inquiry. (c) By defining an innate idea as one which is part of human nature, we have expressly refrained from identifying it with the structure either of the mind or of the body as such. It may be innate mentally, or physiologically. (d) Is an idea innate in the sense that it belongs to a metaphysical timeless being like Kant's unity of apperception or Aristotle's active intellect? Again, we neither affirm nor deny. The human nature of which ideas may be an intrinsic part need not be further defined, whether naturalistically, or from the standpoint of an absolutist. Our phrase "biological derivation" is rather misleading because the term "biological" has naturalistic connotations, to which we have no intention of committing ourselves.

Further, all suggestions of superior validity should be eliminated from the idea of biological primitiveness. Discussions in the past seemed to imply that a conception which was innate to the soul was endowed with exceptional authority, because the soul was noble; but if an idea came from experience, its credentials were suspect because matter was ignoble. This intellectual snobbish-

ness, which measured the value of an idea by its aristocratic parentage, must give place to a more democratic impartiality that sets all ideas on an equal level, whatever their origin. The same facts have also been used to prove the opposite result; thus, it has been maintained that an innate idea, representing as it does the structure or laws of the mind, lacks objective reference; but an empirical idea corresponds to reality. Actually, there is no reason why an idea may not be both subjective and objective, expressing the laws both of the mind and of reality; to use Leibniz's phrase, there may be a pre-established harmony between mind and reality.

At this stage of our discussion, there should be no difficulty in seeing that the lumping together, during the history of thought, of innate with *a priori* ideas, is misleading. A belief is innate in the sense that it belongs to the nature of man; a belief is *a priori* in the sense that it is its own logical ground. The first specifies an internal relationship of idea to human nature; the second an internal relationship of ideas to its evidence. Given that the relations are different, the question may still be raised: may they not be connected, may not the self-evident idea be also the unlearned idea? Plato and Descartes have replied affirmatively. I will now consider some of their arguments and try to show that they are inconclusive.

(a) *Considerations arising from the nature of the object.* The argument is as follows: ideas can be acquired by the mind only through experience; but abstract ideas—already granted to be *a priori*—are not obtained from experience, and therefore they must be innate. We may admit without argument that abstract propositions are not obtained from concrete experience; from this, however, it does not follow that they are not derived from any experience whatever. In addition to concrete experience there is conceivable such a thing as ideal experience. We perceive chairs and tables; also we perceive universals and general laws. The field of presentation includes essences as well as particulars. If so, whenever the mind convinces itself of the truth of an abstract proposition from an analysis of its constituent conceptions, it does so by means of experience, not sensory but rational. The abstract belief is acquired, not innate. Only the nominalist, construing the world as a collection of particulars, might deny the possibility of rational perception; but surely the apriorist school is not nominalistic. Consider Plato, for example, in whose view the laws of physics, mathematics, and logic are just as real as chairs and tables, in fact more so; the formal pattern of the world is *there* just as much as its concrete detail. And yet in the well-known discussion in the *Meno*, he argues for innateness for reasons which run counter

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to his realistic views. The little slave-boy is questioned about mathematical truths which he had not been taught before; as soon as their meaning is made clear to him, he assents to their truth. And this is used by Plato to demonstrate that the slave-boy somehow knew these truths already. But surely a simpler explanation of the matter is possible: namely, that the slave-boy while understanding the meaning of the mathematical propositions was, so far forth, engaged in an act of perception—the perception of mathematical truth, and therefore was reaching his beliefs by the route of experience. Plato and apriorists in general seem astonished by the fact that the mind assents *immediately* to an abstract truth, once it has grasped its purport. Now, the instantaneity of assent is not peculiar to the acceptance of abstract propositions; it is a characteristic of all knowledge based upon experience, concrete as well as formal; thus, as soon as I perceive that the clock is on the mantelpiece I assent to the proposition that the clock is on the mantelpiece.

(b) *Considerations arising from the nature of the cognitive subject.* In fact, Plato is led to espouse innatism from metaphysical considerations; he holds that the soul is incapable of apprehending universals while encumbered with the body; therefore such knowledge of essence as it possesses is a previous acquisition, obtained during an existence in which the soul was free from sense. There are so many varied implications of a religious and metaphysical nature in Plato's doctrine that we can not possibly do justice to it in this article. Confining ourselves to the specific point, we will say this only: we know universals in this life to the extent that we do know them, and if, as is alleged, the body prevents us from getting a clear view of essences, why then, we do not possess a clear view of them. In other words, the actual extent of our knowledge of universals is explicable on the basis of whatever experience we have of universals now, as shadowed forth in particulars.

(c) *Considerations arising from the nature of knowledge.* Another argument against the possibility of ideal experience has been the following: the datum of abstract knowledge is non-temporal, therefore the knowing of it is non-temporal. Thus, it is inferred, there can be no such thing as an experiencing of universals, and abstract ideas must be innate. This argument is based on a confusion of cognition with its object; the datum could quite well be of one character and the knowing of it of another.

The above three points may be summed up in the phrase that the traditional apriorist school has worked on an inadequate conception of experience, wrongly supposing that one who is not observing a particular is not observing at all.

(d) *Considerations arising from the nature of the ideas.* The considerations that follow are of a more fundamental type than the ones already studied. The position now is that abstract ideas—at least some of them—could not in the nature of the case arise from experience, abstract or concrete, because they are presupposed in any situation of experience. Cognition proceeds on the basis of a certain method and certain criteria; these criteria have not been the result of discovery, for the simple reason that they constitute the tests for all valid discovery; the cognitive method has not been derived from observation, since it is implied in any valid observation. Categories are intrinsic to reason, and hence not data for reason. In reply, we would suggest that even though categories were intrinsic to reason, reason itself might be an acquisition. Granted that the categories do not have experience as their source, still it is possible for them to be acquired in some other way. Let us consider some alternatives. (1) One alternative is that reason with its schematism and its categories may be primarily of a social origin. Durkheim holds that the individual as such is not a rational being, but that he acquires a mind to the extent that he is identified with the community. Language is the basic embodiment of the social mind; and as the child acquires it, gradually it assimilates the pattern of concepts and criteria, and thus becomes a rational being. This doctrine, however, merely transfers the problem from the field of the individual mind to that of the social mind. The question still remains: how did the categories make their appearance within the social mind?

(2) Another alternative is that thought, knowledge, reason, with all their presuppositions, are historical emergents, achievements, whether individual or social; that the categories are evolutionary products, experimental hypotheses forged out in the active contact and conflict of man with his environment. Mentality itself belongs to history. (Of course, at this point, the opposition between nature and habit, in the biological field, breaks down).

We have traveled a considerable way in order to demonstrate that innateness and apriority need not go together. And indeed the whole problem arises from the confusion of the two conceptions of logical as opposed to biological derivation. Once it is realized that *a priori* and innate do not mean the same thing, it is evident that an idea may be independent of experience in the logical sense, and still be learnt, that is, obtained through the route of experience, in the biological sense.

HARVARD UNIVERSITY.

RAPHAEL DEMOS.

THE UNIVERSE OF LIGHT¹

SIR WILLIAM BRAGG has given to a book on optics a brilliant title, *The Universe of Light*.² The opening sentences of the first chapter are these: "Light brings us the news of the Universe. Coming to us from the sun and the stars it tells us of their existence, their positions, their movements, their constitutions and many other matters of interest. Coming to us from objects that surround us more nearly it enables us to see our way about the world: we enjoy the forms and colours that it reveals to us, we use it in the exchange of information and thought." The reader's attention is then called to the rightful and reasonable extension of the meaning of the word "light" to cover the wide range of invisible radiations, the great conveyor of energy from place to place, radio transmission, Röntgen rays, rays from radio-active substances, and, possibly, cosmic rays. "These greatly differing phenomena are all manifestations of one principle, the magnificent inclusiveness of which has grown clearer continuously as we have studied the nature of light. . . . Even the atoms themselves seem to fall, in certain aspects, within the same great category. Light, therefore, using the full meaning of the word, transmits energy which is the mainstay of life, and gives to living beings the power of observation: and it is akin to the matter of which all things animate and inanimate are made. The universe is its sphere of action. We do it no more than justice when we speak of the Universe of Light."

Clearly we do it no less, if light is a principle of such magnificent inclusiveness. After reading the book, however, I am prompted to ask whether it should be read in the light of the title or the title read in the light of the book? What is it that has been illuminated and made clearer and more understandable, the universe or the messenger that brings us the news of it? Is the book about the messenger or does it contain his message, in part, at least? If the latter, what then is the universe like? The book leads me to ask these questions, and not this book alone, but books on light generally. Sir William's book, by its suggestiveness and his competence, has made them more interesting than ever. I do it and him, I hope, no injustice by using it as a text for comment.

This particular book is chiefly about the messenger's way of travelling. It is essentially an introduction to optics for the general reader and is a revision and enlargement of the Christmas Lectures of 1931, given at the Royal Institution by the author, under the same title. "I have taken as the thread of my story," Sir Wil-

¹ Read at the meeting of the Eastern Branch of the American Philosophical Association, Amherst College, December, 1933.

² New York: Macmillan Company, 1933, pp. xi + 283.

liam writes in the Preface, "that old rivalry between two theories of light which has been one of the most powerful contributions to the development of science. The corpuscle and the wave, associated always with the names, respectively, of Newton and Huygens, have each in turn seemed to be finally victorious. The struggle is ending in a manner as unexpected as it is illuminating. There is to be a reconciliation of hypotheses which we had thought to be mutually exclusive; and the fact warns us of the danger of allowing our mental imaginings to become fixed beliefs. We still find it difficult to understand how these two theories can both be true; yet we are forced to do so by the mass of good evidence which can be brought forward in support of each of them. We conclude that what at one time may be beyond our understanding may later become clear, not only through the acquisition of fresh knowledge, but also by the training of our minds to new ways of thought."

A theory of the way a messenger travels may have little to do with the news he brings. The radio brings us news from the ends of the earth, but a theory of radio transmission would hardly be that news. There is considerable difference between the way a messenger goes from one place to another and the message he brings. This seems to be conspicuously true in the case of light. Whether it travels by way of wave or corpuscle or by way of both together, its message, at least for those who see, is that the visible world is the chief object and source of all their knowledge. In this world light and darkness alternate, and it is easy to think of light travelling in it and dispelling the darkness, although, since Aristotle, we have been repeatedly cautioned about thinking so. Professor Bridgman has said that "light as a thing travelling must be recognized as a pure invention."³ Yet it is natural to think of light as travelling, for lamps, when lit, seem so evidently to send out their light, mirrors reflect it, prisms refract it, and lenses focus it. The lantern to our feet carries its horizon of illumination along as we walk. Shadows fall. There are opaque bodies through which light does not seem to pass. Something that travels, although we never see the traveller, is a conception of light difficult to avoid when we consider the behavior of a lighted world. It is, however, the conception of something not identified. The distinction between what we ordinarily call light and darkness is like the distinction between day and night, one which does not reveal an agent which makes the difference, unless the agent be something like the sun or other glowing or radiant bodies. They are not the light of theory. We are consequently forced, in dealing with light as something that travels, to deal with it indirectly, not with it itself, but with its manner of travel-

³ *The Logic of Modern Physics*, p. 153. N. Y.: Macmillan Co., 1927.

ling. Does it travel like a projectile or like a wave? Hence the rival theories and the current attempt to reconcile them. This is the story the book tells.

One can not read the story, even in the condensed form in which Sir William relates it, without being profoundly impressed by the brilliancy and skill shown by those who have contributed to it. Here is one of the masterpieces of modern physics. Can I be pardoned the apparently impudent question, What is it all about? I intend no impudence. I was once content with the answer that it is all about light, but am no longer content, and the more I read, the less content I am. My admiration for the intellectual skill which has marked the development of the theory and the remarkable experimental verification of deductions from it, is greater than it was when I took my first lessons in it years ago. I do not put such matters in question. What I have seen done before my eyes and read in books written by responsible men is too evident to be gainsaid. It is the success of the theory which baffles me—the success attained by dealing with modes of travel without an identifiable traveller. A projectile that flies through the air like a bullet from a gun, the movement of waves in a pan of water, the impact upon balls in series, and all the many means, aided by mathematical calculations, which are used in building up the theory, make clearer and clearer modes of travel, but obscurer and obscurer the traveller itself. My knowledge of corpuscular and wave propagation increases, but as knowledge of light, it is like knowledge of a light that never was on sea or land. The Light, the light that warrants our speaking of the Universe of Light, although it remains unidentified as corpuscle or wave or both somehow together, is that which reveals that there is a visible world accessible to observation and experiment. Its actuality is declared by the alternation of day and night and by opening and closing the eyes. It is that which brings us news of the universe.

If the news, or part of it, is optics, what then is the universe? The answer seems to me to be this: it is something whose framework, when we attempt to model or conceive it, is modeled and conceived in an optical way. In other words, if optics is news, then models, maps, plans, patterns, designs, systems, or conceptions of what the universe is like, as containing all that is, are bound to be of a sort which an observer might possibly see. Otherwise considerations of shape, size, distance, position, motion, orbit, and the like seem to lose meaning. Space seems to disappear. If it is characteristic of the universe that the angle of incidence equals the angle of reflection, the model must be congruent with that principle. If we consider whether the universe is contracting or expanding, whether it is lim-

ited or unlimited, it is an optical model which gives point to the consideration. In short, if optics is valid news, then models and conceptions of the universe are formed in terms of an optical system. The universe, whatever else it may be, is optical.

The acceptance of this conclusion raises many interesting questions. I would mention a few of them. One of them is the sort of question Professor Royce dealt with in his *World and the Individual*. I ask it with reference to the conclusion just reached. What is to be said of a system or universe which is delineated and conceived in an optical way? Any answer to this question seems to me to be, in principle, like Professor Royce's answer, irrespective of the particular use he made of it. Modeling and conceiving such a system in optical terms are themselves determinations or delineations of what such a system is. This strikes me as both obvious and profound. It is obvious that optical systems are thought of in optical terms, angles in terms of angles, distances in terms of distance, positions in terms of position, and so on. The repetitions and correspondences which are therein involved, make it impossible, however, to limit and frame the system itself in terms of angles, distances, positions, and so on. Such terms are limited in their application in such a way that they are not applicable to the system itself. This is, perhaps, profound. We are dealing with a system which, if delineated at all, must be delineated in terms of optical models which its character imposes, but which are not replicas of that character. These models can not be placed side by side with the system and then compared. They serve in exploring the system, but they do not embrace it. This does not mean that the system is so vast that no model can embrace it, nor that it is greater than any conceivable model. It means rather that optical frameworks are in the system, but the system is not in any framework at all. Space is in it, but it is not in space.

From this conclusion, another seems to follow, namely, that there can be in the universe no uniquely privileged observer, no observer, that is, who can compare what he observes with the universe itself. Although light brings us the news, it does not send it. The difference is considerable. The acknowledged and evident effect of its coming is its message and that message is not about a transmitting station which we might occupy and then observe whether the message received was the one intended to be sent. Optics forbids such a privileged station. Why, then, I would rhetorically ask, attempt to construe the universe as if there were a uniquely privileged observer somewhere? If there is no such observer, why suppose that optical perspectives are anything else than necessities of an optical system? Why imagine that the intellectual extension of the terms

of delineation like straight line, angle, rotation, etc., reveals what such an observer would see if there were one? Why suppose that the universe can be spatial without at the same time being optically instrumented? I leave the questions in their rhetorical form. If optics is news that the universe is optical, it seems to me to be quite superfluous to try to get back of the news and find an observer who can tell us whether the news is correct. It seems futile to ask what the news would be for an observer independent of the types of the optical behavior of an optical world.

• • Taking optics, then, to be news of the universe, I would venture to amend one of the sentences quoted from Sir William Bragg's book. Speaking of light he says: "The universe is its sphere of action." I would say: Its sphere of action is the universe. Light acts; then the universe is a sphere whose center is anywhere and whose circumference is nowhere. Hence space as optically determined, hence the inevitability of optical models and frameworks without an embracing framework, and hence the absence of a uniquely privileged observer.

Light brings us other news besides that of a universe optically instrumented or schematized. "Coming to us from the sun and the stars, it tells us of their existence, their movements, their constitutions and many other matters of interest." It lights up the universe, makes it visible at least in part, revealing that there are sun and stars in the sky, and minerals, plants, and animals on the earth. Perhaps this kind of news is not the more important, but it is certainly the kind which most absorbs our attention. It is a dramatic kind of news, as if light were exhibiting what it can do to waves and corpuseles by illuminating modes of travel. Then there is splendor and scenery to behold and the drama of life and death. One ought not to expect to find this vision in a book on optics, but books on optics rarely fail to mention it. Vision is too evidently the major consequence of letting light be. Without this consequence we should never speak of a universe of light or of getting news of the sun's existence; books on optics would never be written. The books do vision no more than justice by making at least a bow.

What this particular book says about vision, I have found perplexing and exciting. It says the usual thing, but not in the usual way. The usual thing is that there is a device in the eye "which gathers together the waves coming from each and every external point, and converges them upon a corresponding point on the retina. Thus all the details of the view are impressed upon the retina in their proper places relative to one another, and each with its proper character. The whole is then referred to the brain by way of a complicated system of nerves, and is there interpreted"

(p. 38). If this were all, it would be the usual thing, leaving the question open whether the "interpretation" is vision. But light as a newsbringer is constantly stressed and stressed in such a way that I can not regard the expression as a pretty metaphor. "When light enters the eye it brings news of the source from which it has come, and of its experiences on the way. In particular it tells of the last encounter with a material object before entry into the eye, and so enables the owner of the eye to 'see' that object" (p. 38). Such expressions make it hard for me to identify vision with an interpretation in the brain. I can think of light as informing the brain that there is a sun in the sky, but I find it difficult to think of the brain as seeing a sun in the sky. And I should find it just as difficult if I substituted for "brain," "mind" or "consciousness" or "soul."

I find this difficult because I must believe that eyes and not brains are the organs of seeing, just as ears and not brains are the organs of hearing. Consequently, to identify interpretation in the brain, or in the mind, with vision seems to me to be curiously unintelligible. I say, curiously unintelligible because such identification would involve either vision without eyes or the reversal of the process which generated the interpretation, going back to the retina, through the lens and ending with that last encounter of light with a material object before entry into the eye. In the latter case, it would seem as if the brain looked back over the course by which light had come to it, and looked back not with the eye, but through it. Newton⁴ thought that God had vision without eyes and Molyneux⁵ exclaimed: "He that made the eye shall see!" It is, perhaps, possible that a being having vision without eyes could make them, but he could hardly make them in order to see. That would be a little ridiculous. If, however, he lived in a world where eyes were necessary for vision, it would not be surprising if he invented a microscope. I can readily accept brains without a visible world, but I can not similarly accept eyes. And it is neither brains nor eyes that make the world visible, but the light itself. So far as I can make out, all that the brain does with the help of the eye is to coördinate our activities in an optical world made visible by the light. It is that world that is interpreted and not a nervous disturbance in the brain.

Accordingly, with little reservation and with possible misconstruction, I can repeat the words: "When light enters the eye it brings news of the source from which it has come, and of its experiences on the way. In particular it tells of the last encounter with a material object before entry into the eye, and so enables the

⁴ *Optics*, Queries 28, 31.

⁵ *Dioptrica Nova*, Part I, Prop. 28.

owner of the eye to 'see' that object." Yes: the man who has eyes and brain sees the visible world, but that world quite evidently is not in his eye, or in his brain, or in his "mind." It is in the light.

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BOOK REVIEWS

The Heroic Age of Science. WILLIAM ARTHUR HEIDEL. Balti-
more: The Williams and Wilkins Co. 1933. vii + 208 pp.
\$2.50.

The title is taken from a sentence of Whewell: "The sages of early Greece form the heroic age of science"; and the purpose of the book is given more definitely in the subtitle: "The Conception, Ideals, and Methods of Science among the Ancient Greeks." It is not meant as history of science, but rather a description of the Greek understanding of science with examples.

The book opens with an essay of sixty pages on the "Concep- tion and Ideals of Science among the Greeks," in which general features are treated, e.g., the distinction between *historia* and *mythos*, the relation of science to religion, and the contrast between law and nature. The second part, on "Methods," consists of an introductory chapter, then chapters on "Observation and Induc- tion," "Classification," "Analogy," "Experimentation," and an "Epilogue."

The point of view is sane, the scholarship is more than adequate both historically and philosophically, and the style is clear and easy. The book can be recommended to those who are interested in the history of science, or of logic, or the history of philosophy in general.

R. S.

Le Dilemme Aristotélicien (Archives de Philosophie, Vol. X, Cahier II). ANDRÉ BREMOND, S.J. Paris: Gabriel Beauchesne et ses Fils. 1933. 155 pp.

The dilemma of Aristotle Père Bremond traces to "the deso- lating mystery of his antiplatonism." Having condemned the doc- trine of Platonic Ideas because of a supposed dualism between them and the sensible world, Aristotle (so the interpretation runs) sought to establish a philosophy in which reality was conceived to be continuous from matter to pure actuality. But the Platonic Intelligibles are concealed under the name "actuality," and the unified Aristotelian reality is divided into a world, in which nature or "the soul of things" is the efficient mover, and pure actuality, which is beyond the world. As consequence of this major dilemma

there are antinomies and aporiæ in all the doctrines of Aristotle's philosophy. In logic, in metaphysics, in physics, in psychology, in ethics, the same problem recurs in varying forms—how to reconcile the persistence of substance with universal change, ideas with things, the soul as active intellect with the soul as form of the body, a static syllogistic science with nature conceived as a continuity of living forms, God as pure actuality with the dynamic world of experience. Père Bremond brings considerable erudition to the task of reducing the antinomies of being, causality, and knowledge to a single dilemma, nor does his interpretation travel unsanctioned ways, for he can, and does, derive comfort from Jaeger and Taylor. It is interesting to observe consequently that, having shown there is no coherent Aristotelian system, he discovers (with Taylor) a synthesis, sometimes wrongly attributed to Aristotle, whose true name is Thomism. It is no reflection on this study of Aristotle that it should close with the shibboleth, "Oportet ut sint *Ideæ!*", for it has been a long time since a work on Aristotle has appeared which does not betray Platonic tendencies and nostalgias. Père Bremond's study is in the modern mode of Aristotelian criticism which labors with an irony worthy of Plato, though perhaps unconscious, to treat the philosophy of this great critic of Plato by tracing in it the steps of a departure from Platonism; and that departure usually turns out to be, in the same degrees of progression, a departure from philosophic truth and vitality.

R. McK.

A History of Christian Thought. Volume I: Early and Eastern; from Jesus to John of Damascus. Volume II: The West; from Tertullian to Erasmus. ARTHUR CUSHMAN MCGIFFERT. New York: Charles Scribner's Sons. 1932, 1933. 352 and 420 pp.

These two volumes were the last work of the late Arthur Cushman McGiffert, the second of them appearing after his death. With his books on *The Apostolic Age*, *The Apostles Creed*, and his edition of Eusebius's *Church History*, and with his *Martin Luther*, *Protestant Thought before Kant*, and *The Rise of Modern Religious Ideas*, they constitute a history of the intellectual life of the Christian Church through its entire development.

McGiffert's genius at historical interpretation of currents of religious thought is conspicuously apparent in his treatment of the early period. He develops effectively a contrast between the mystical tradition that was expressed in diverse forms in Paul, John, Ignatius of Antioch, the gnostics and Marcion, and the legalistic tradition that is found in most of the so-called Apostolic Fathers, the Greek Apologists, and Irenæus. In the former tradition "Chris-

tianity appeared under the guise of a mystery-religion, in which salvation is secured by union with a dying and risen Lord." In the latter "it appeared rather as a moral system based on divine sanctions," as a law of liberty that had superseded the Jewish law and eliminated racial and local features so as to become a universal law for mankind.

Particularly brilliant also is McGiffert's treatment of the trinitarian and christological controversies of the fourth and fifth centuries. Intellectual developments in this "critical period in the history of the church" were not much affected, in McGiffert's judgment, by political institutions or events or by the immense contemporary changes in the status of the church in the empire. Through these controversies there constantly went a clash between ideas of divine transcendence stated in terms borrowed from Platonism and divine immanence stated in terms taken over from Stoicism. The credal formulae of the great councils, as of Nicaea and Chalcedon, reveal a victory of the Platonic ideas: indeed McGiffert goes so far as to say that if the Stoic metaphysics had been dominant a doctrine of the Trinity would not have been necessary to save the values which Christians cherished.

Among the best chapters in later sections are those on Irenaeus, Tertullian, Cyprian, and especially Augustine. The medieval period is covered by chapters on Eriugena, Anselm, Abelard, Thomas, Duns Scotus, William of Ockham, and others, and in these chapters, much more than in most histories of philosophy, the integral character of the philosophical and theological thinking of the time is portrayed.

S. P. L.

Examination of McTaggart's Philosophy. Vol. I. C. D. BROAD.
Cambridge: The University Press. 1933. lv + 460 pp.

This very able analysis of Volume I of *The Nature of Existence* will interest students of philosophy on at least three counts. (1) As an "examination" of McTaggart's metaphysics it is, of course, the best work that has appeared or is likely to appear on the subject. The analysis is lucid, detailed, scrupulously exact, and it offers as useful aids to the reader an analytic table of contents some 40 pages in length, a "retrospect" which summarizes in 86 "steps" the course of the argument and criticism, and an index from which Dr. Broad's characteristic humor is not absent. If the exposition of some of McTaggart's demonstrations assumes at times the character of an exposé, the fault is not the critic's and the judgment finally passed on this variety of philosophic "absolutism" seems eminently just. (2) At several points in the argument Dr. Broad

has included contributions of his own to such topics as the status of propositions, the nature of definition, what implication means at Cambridge and elsewhere, and the possibility that Absolute Processes may be the only particulars. His discussions are invariably enlightening in so far as they deal with the discrimination of possible meanings and the statement of alternative positions on points at issue. His constructive suggestions are ingenious and frequently plausible. (3) In his treatment of Stout and Bradley, and even of Hegel and Bosanquet, Dr. Broad displays a willingness and an ability, unusual at Cambridge, to find intelligible meaning in doctrines not formulated in the Cambridge manner. The catholicity thus manifest seems distinctly worthy of emulation.

A. E. M.

Philosophische Gegenwartsfragen. HANS DRIESCH. Leipzig: Verlag E. Reinicke. 1933. 184 pp.

Driesch here collects a number of glosses written during the last three years on problems raised in phenomenology, logical positivism, *Ganzheitstheorie*, and the theory of physical indeterminacy. The book is in no sense an introduction to these problems, nor to the author's systematic views, but presumes an acquaintance with both. Driesch is dressing the lines of his system, and reminds us: that he distinguishes carefully between immanent intuition of types of order, empirical experience, and metaphysical hypothesis, which the newer phenomenologists fail to do; and that he is a better positivist than those of the Wiener-Kreis, because he is less prejudiced in favor of mathematical-physical conceptions.

Instead of regarding *Ganzheit* and causality as alternative principles of explanation, as do some, Driesch insists on the recognition of special types of *Ganzheitskausalität*. In this connection he says that the cells of living organisms, besides being governed by entelechies, may also be in "understanding" communication (*Verständigung*) with each other by normal processes such as we discover only in the abnormal cases of telepathy and the like. This possibility, he says, he has not put forward previously.

A new venture also is his argument that the Heisenberg indeterminacy can not mean "real freedom" of the electrons, because that would make impossible even the frequency calculations.

H. L. F.

Das Problem der Gleichzeitigkeit. KARL VOGTHERR. München: Ernst Reinhardt. 1933. 195 pp. RM. 5.50.

This book is an attack on the restricted and general theory of relativity, and especially on the former, by means of an analysis of

simultaneity. Its author claims not only to establish an adequate definition and criteria of absolute simultaneity, but to show that its relativization is impossible. Vogtherr first establishes the principles of pure geometry, chronometry, and kinematics, and then applies these to develop the "only possible" physics, in which the "conventions" so characteristic of modern theories have no place. The argument rests upon essentially Kantian bases, with a coloration borrowed from Driesch: the principles of geometry and kinematics are either axioms true *a priori*, or they are indubitably given in a pure intuitive act of the mind. Thus, for example, Euclidean geometry alone is possible, and the parallel postulate is proved on the basis of a definition of parallels as lines having "the same direction." It is sufficient to say that the circularity and fallaciousness of this "proof" was pointed out by Proclus. Again, an ether is postulated, and its isotropy and homogeneity are proved by means of a vaguely formulated, but of course "indubitable," principle of causality; and the adverse experimental evidence for such an ether is explained by convenient *ad hoc* hypotheses such as the "ether drag." While Vogtherr has mastered some of the details of modern relativity physics, there is little to show in this book that he has understood what he has read.

E. N.

L'Expression de la Vie dans l'Art. CHARLES LALO. (Bibliothèque de Philosophie Contemporaine.) Paris: Félix Alean. 1933. 263 pp.

The French are a rational people; their philosophers at least have a love for rendering chaos intelligible in schemes and formulas. In this volume the chaos of esthetics is reduced to systematic organization; one has a feeling, none the less, that the chaos remains, and the order is an order gracefully and not quite relevantly imposed on it. M. Lalo offers some useful corrective to the identification of art and life—indicating that art, on many grounds imposed by beauty and by logic, "diverges from life." He has all the apparatus of learned and elegant allusion common to French critical analysis. There are excellent summaries, some malicious, of Rabelais, Bossuet, La Fontaine, Corneille, La Bruyère, down through Croce, Heidegger, and Proust. There is finally proposed an esthetic relativism, a science of "language well made" in a paragraph printed in italics as the compressed truth about esthetics:

"La beauté artistique est—un plaisir artificiel—né d'une activité de rêve libératrice—organisée comme un jeu—sous une forme harmonieuse—dont la valeur est jugée supérieure et collective—tout un dynamisme déclenchant communément une puissance re-

sonante affective" (p. 236). The rest of the chapter expands and defends the formula. Some of the details of the expansion are more illuminating than the formula.

I. E.

Scienza e Filosofia. UGO SPIRITO. Firenze: G. C. Sansoni. 1933. 154 pp. 12 lire.

This collection of articles is bound together by the common purpose of clarifying and defending *actualism*. Actualism identifies philosophy and something which the author calls "life." Life is not presumably the various exercises of living, but all of them fused into a kind of concrete unity which, since it seems desirable, is believed to be ideal and hence real. Philosophy, therefore, can not be of any one period or the exercise of any one group of men. It is the concrete history of all periods—the word "concrete" being understood in the Hegelian sense—and the unified expression of all interested parties. The sciences are differentiated from one another not by their subject-matters, but by "points of view," and philosophy, it would seem, takes all points of view at once. It is "not a particular form of knowledge but the universality of all knowledge" (p. 49).

The essays are particularly interesting as a picture of extreme Italian idealism, but provide more edification than enlightenment.

G. B.

Das Gesetz der Ursache. JOSEPH GEYSER. Munich: Ernst Reinhardt. 1933. 164 pp. RM. 6.50.

The author writes a serious-minded and highly dialectical argument from a Neo-Scholastic standpoint, and answers all his critics very conscientiously. He assumes that there is a meaning to the statement: "There can be found an object A which is the efficient cause of any given object B." He discusses the reasons for considering it true. Making a sharp distinction between essence and existence of contingent things, he lays down a sort of law of existence, that an essence continues in its state of existence or non-existence until some outside force brings about a change. He seems to feel that this involves less of an assumption than is usually contained in the principle of sufficient reason. Beyond a passing reference to Heisenberg, he hardly touches on the present scientific situation. He refers to Kant, but not to the Kantian type of argument which seeks to establish the objectivity of causality by defining objectivity in terms of causality. He appeals to inner experience, and makes wide concessions to empiricism, so long as it does not take the extreme form of the positivism of Philipp Frank. But

really most of his argument might have been written in the Middle Ages, and it is doubtful if he contributes much to the subject, from the point of view of an American reader.

H. T. C.

The Spirit of World Politics: With Special Studies of the Near East. WILLIAM ERNEST HOCKING. New York: The Macmillan Company. 1932. xi + 571 pp. \$5.00.

The argument of Professor Hocking's earlier volume of political philosophy, *Man and the State*, is here carried forward into the realm of international relationships, with emphasis upon the ethical issues involved in the treatment of the so-called backward peoples by the great powers. The book is unique among treatises of political theory in that nearly two-thirds of its pages are occupied by personally-gathered illustrative material drawn from Egypt, Syria, Palestine, and Africa. Only extremists, of whom there are many, will question either the extraordinary fairness of the author's factual descriptions, or his outspoken verdicts upon the actual in the light of his high and hopeful ideals. Moralists with the audacity to risk testing their theories in the field of world-statesmanship are all too rare; and it ill becomes the closet-critics to heckle from the rear. At the same time the author's challenge to ethical relativists is too explicit to ignore; and it should be pointed out that the "essential ethical convictions" which he took with him to the Near East seem to reflect a large measure of personal preference, which may or may not possess cosmic significance. In the face of the immense difficulties, which he well understands, of making any pronouncements in international political ethics which are both realistic and coherent, Professor Hocking has produced a notable pioneer work.

H. A. L.

JOURNALS AND NEW BOOKS

RIVISTA DI FILOSOFIA. Anno XXIV, N. 4. D. Hume e il problema critico della conoscenza della filosofia moderna: *E. De Michelis*. A proposito del principio economico: *A. Levi*. Il valore della filosofia di F. H. Bradley: *C. Goretti*.

Brühlmann, Otto: *Zweierlei Wissen. Zur Lebenskrise durch die Entfesselung des Verstandes*. München: Ernst Reinhardt. 1934. 48s. 1.50 M.

Simpson, George: *Emile Durkheim on the Division of Labor in Society*. Being a translation of his *De la division du travail social*, with an estimate of his work. New York: The Macmillan Company. 1933. xlv + 439 pp. \$3.50.

NOTES AND NEWS

With this number THE JOURNAL OF PHILOSOPHY is initiating a new policy regarding the publication of book reviews. Ten Book Editors, whose names appear on the inside front cover, have consented to serve as regular reviewers of incoming books. They are recognized scholars in several of our universities or colleges and represent various fields of special interest. Their reviews will be very succinct. The aim is to review promptly within a few weeks every new book of a philosophic character that reaches our office.

More extensive critical discussions of important current books or of particular issues raised in current philosophical literature will continue to be welcome and will be published as articles, in so far as the space available in the JOURNAL permits.

Another new feature of the JOURNAL is an *Annual Philosophical Bibliography*, to be published as one of the August or September numbers. The purpose of this bibliography is to keep up-to-date the Bibliography of Philosophy now being prepared under the auspices of the American Philosophical Association, covering the years 1902-1932. The annual bibliography will be included in the regular subscription price of the JOURNAL, but it will be necessary to charge \$1.00 for the bibliographical number separately.

The newly-elected officers of the Eastern Division of the American Philosophical Association are the following: President, Warner Fite; Vice-President, F. S. C. Northrop; Secretary-Treasurer, Harold A. Larrabee; new members of the Executive Committee, Ralph M. Blake and Percy Hughes.

Professor Alfred North Whitehead will give the Third Annual Davies Lecture in Philosophy at the Institute of Arts and Sciences of Columbia University, March 7, 1934. The title of his lecture is "Reactions between Science and Philosophy."

THE JOURNAL OF PHILOSOPHY

There is no similar journal in the field of scientific philosophy. It is issued fortnightly and permits the quick publication of short contributions, prompt reviews, and timely discussions. The contents of the last six issues are as follows:

Volume XXX. No. 21. October 12, 1933.

Naturalism and Agnosticism in Santayana.

STERLING P. LAMPRECHT.

Report of the Chicago Meeting of the American Philosophical Association. HAROLD A. LARRABEE.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 22. October 26, 1933.

Dualism and the Paradox of Reference. ARTHUR O. LOVEJOY.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 23. November 9, 1933.

The Innocence of the Given. DONALD C. WILLIAMS.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 24. November 23, 1933.

Studies in the Structure of Systems. KARL SCHMIDT.

Is Idealism Incurably Ambiguous? F. C. S. SCHILLER.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 25. December 7, 1933.

What is Speculative Idealism? JAMES RISSETT PRATT.

Hegel's Attitude on War and Peace. A. C. ARMSTRONG.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 26. December 21, 1933.

The Logic of Measurement. A. CORNELIUS BENJAMIN.

Whitehead's Concept of Process: A Few Critical Remarks.

RALPH B. WINN.

Book Reviews. Journals and New Books. Notes and News. Index to Volume XXX.

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PERSPECTIVITY AND OBJECTIVITY

IN recent philosophy, the problem of perspectives has become of the greatest importance. Indeed, it is so central and fundamental as to strengthen the belief that many other problems depend upon it. For instance, Professor G. H. Mead insists¹ that the very reality of time depends upon emergent novelties and unique happenings. Every emergent implies a perspective and, being emergent, may be considered as at once in *various* perspectives. Such a situation confers a social character upon the novel happening and any specious present is actually constituted by such empirically distinguishable, perspective happenings.

I

In the light of this central importance of perspectives for contemporary philosophy, it is essential to examine Lovejoy's belief² that perspectivity involves the wholesale negation of the very possibility of knowledge.

For Lovejoy, a perspective character or datum belongs to the ulterior relatum (object of reference, cognoscendum) only from the standpoint of the proximate relatum (the percipient event). This involves: (a) the numerical distinctness of the data of different percipients, i.e., your percept and my percept of the tree are two different particulars; (b) the *qualitative* disparity of the content present to the two percipients. For the perspective determines (conditions) the nature of the content present. Hence two percipients, or the same percipient in different perspectives, can not experience the same *kind* of data. The hypothetical common cognoscendum will present different aspects from different standpoints.

A standpoint is a point of view for sensing something external to the standpoint and many standpoints may be assumed to have a common locus of reference. Any standpoint consists of the total set of conditions which gives to any aspect of the cognoscendum a special character which does not otherwise belong to it and does not belong to other aspects of it. Thus the constitution and condition of any percipient's sense organs and brain, of his mind—if

¹ *The Philosophy of the Present.*

² *The Revolt against Dualism.*

such be allowed—etc., are a part of his standpoint or perspective, the proximate relatum, determining the nature of the experienced content or datum. A perspective is defined as “any relation between a percipient event and the object of reference which makes the content given by means of that particular event unlike the object as it is apart from that relation” (p. 120).

Now if a datum is *only* a perspective appearance, if it is what it is solely from the standpoint of a percipient and *only for him*, and only by virtue of his individual constitution (retina, optic nerve, brain, etc.), then this experience does not afford what is usually meant by knowledge. It has all the marks of subjectivity. Thus any view such as objective relativism (Dewey, Whitehead, Mead, Murphy, and others) or perspective realism (McGilvary, this JOURNAL, Vol. XXX (1933), pp. 309–330) which makes perspectives central in knowing is hopelessly inadequate. On the one hand, insists Lovejoy, if the nature of the datum is determined by the perspective, the latter greedily swallows even its own object of reference and the would-be knower is thus confined within a point of view from which nothing whatsoever outside that viewpoint can be experienced. This is solipsism with a vengeance. But on the other hand, whatever appears from any standpoint would have to be objective and all appearances equally so. There is no standard object and the inability to distinguish truth from error would ensue. Everything would actually be whatever it appeared to any or all percipients to be. Illusion, error, appearance, could never, therefore, be distinguished from truth and reality.

Hence the awareness of a datum found in only one perspective and determined by a private standpoint is not what is meant by knowledge. On the contrary, genuinely to know is precisely to transcend standpoints, to apprehend characters which are *not* relative to special viewpoints. Science looks for things not relative to particular points of view and the more changes in standpoint the more reason there is for identifying data found common to all standpoints with the external object. The cognoscendum has always been a sort of absolute or constant and the test of objectivity is invariance for all observers. Objectivity can only begin, therefore, where relativism in the sense of perspectivity ends. Science, common sense, and philosophy (until recently) has always assumed this to be so. So far Lovejoy.

II

At this point I wish to consider somewhat the genesis of a perspective. In the first place, relativity science insists that perspectives, frames of reference, are in nature. The perspective is not to be relegated to any merely private or subjective (psychological)

realm.³ The perspectives in their interrelationship constitute the nature that science finds and investigates. There is no world of independent physical entities of which perspectives are merely selections or points of view which must be discounted or transcended in knowing the real object. The scientist's nature is an interrelationship of perspectives.

How does a perspective arise? As there can be no organism without an environment, so no individual perspective can arise without the surrounding whole or common perspective in nature. Cohen's principle of polarity would be applicable here. The individual perspective (physical or human) implies other perspectives and the whole (the common perspective) and vice versa.

This is seen in the physical world where the point of view is concerned with physical instruments apart from human observers. A chronometer or photographic plate in one consentient set will register the world from that viewpoint as will still other clocks and plates from other consentient sets. What each instrument is and what each registers from its respective viewpoint depends not only upon that viewpoint, but also upon its relations to the other perspectives and to the common whole. And the nature of the common perspective is necessarily affected by these relations which are thus symmetrical in character. As when an organism changes, its environment becomes different; and as when the environment alters, the organism, if it continues successfully to live, becomes a different organism, so we conceive the relations of individual and common perspective in the physical world (apart from human observers) to be.⁴

The reciprocal, constitutive importance of individual and common perspective is seen all the more clearly in a consideration of human perspectives. Here (at this point following Mead) any individual self and other selves arise together. There is not the discovery, first, of a private self and then the desperate attempt to overcome solipsism, to establish contact with an objective social

³ Russell, while calling perspectives subjective (because they are relative) insists that it is a *physical* subjectivity which would exist even if there were no minds or percipients. That is, these perspectives are in nature apart from human observers. Compare Whitehead's view of nature as an intersection of time systems.

⁴ Compare Whitehead's *Process and Reality*, p. 444. "The theory of prehensions is founded upon the doctrine that there are no concrete facts which are merely public, or merely private. The distinction between publicity and privacy is a distinction of reason." But I am attempting to sketch a physical theory of perspectives without making "feelings" or "mind" as essential as do Whitehead and Mead. Mead, in making mind so central, seems to tend strongly toward idealism; while Whitehead has already been made an idealist by Hoernlé. (See the last chapter of *Contemporary Idealism in America*, edited by Barrett.)

and physical order. The others and the individual self arise in the social act together. The subjective-objective polarity arises somewhat late in any individual's growing experience. It is a distinction within a larger whole; not the finding of a world irreparably shattered into an individual, private perspective and a postulated larger common perspective which must always be taken upon faith or representation. In this view the larger social perspective moulds the individual while the latter adds to and helps to determine the larger whole from his individual point of view. The entire social whole is merely such an organization of individual views and the common perspective.

III

With such a view of perspectives, the difficulties implied in Lovejoy's position are, I feel, surmounted. Lovejoy insists, in fact, upon an unnecessary and impossible objectivity; his position, if rigorously carried out, would leave only the Minkowski world as genuinely objective.⁵ There is something radically wrong with a philosophy which consigns the entire world of human experience to subjectivity and makes objective only that which is forever beyond the possibility of experience. Such a view is objectionable to both the scientist and the philosopher who takes experience seriously.

Why should "objective" in the sense of being an aspect or character of an external or experienced object be required to mean existing independently,⁶ and beyond the possibility of any perceiving event? Surely neither common sense nor science insists upon this. A physicist looks into a spectroscope. He finds a certain line in a certain part of the spectrum.⁷ He calls a second, a

⁵ Objective means, for Lovejoy, not merely actually existing but existing independent of any experience or perceptual relation. Thus by definition objectivity is placed beyond the reach of any possible experience. See the *Revolt*, pp. 148, 154, 130-131, 103.

⁶ The word "independence" has various meanings which are often confused. For common sense an object exists independently if it is not now being experienced, although it may, given the proper conditions, be experienced. For the physicist, much the same meaning attaches to the term. That is independent which is irrelevant at the moment. But it is always a possibility of experience. Philosophers, on the other hand, often use the term to mean that which could never possibly enter experience. These various meanings are at times used interchangeably, to the detriment of clear thinking. For instance, Lovejoy sometimes defines independence as the capacity to go on being when unperceived or unthought. This would be acceptable to plain man and scientist alike. But much of the force of both his psycho-physical and epistemological dualism obtains from the insistence upon realities, behind, back of, and forever outside of, any possible experience. The substitution of now one, now the other, meaning, increases the plausibility of his position. Cf. the discussion of independence in Lewis's *Mind and the World Order*, pp. 192 ff.

third; physicist who (from the same perspective) look into the instrument and agree upon the color and position of the line. There is no doubt in these scientists' minds that the particular line is objective. There is no assumption that the experience is: (1) either causally or existentially subjective; (2) merely a sense datum; (3) epistemologically subjective; (4) merely private in character, an appearance and perhaps a distortion of a never to be experienced cognoscendum.⁷ The experience is truly taken as revealing something about the external world of nature from this particular perspective. Constancy is found within the perspective and no reference need be made to a "standard" object somehow objectively beyond the experience.

Jeans insists⁸ that when several percipients experience the same or very similar impressions they are considered objective and attributed to external events. Only when one individual receives an impression which others can not receive, although they are in a position to do so, is the experience labelled subjective. He goes on to define matter as "that which is capable of originating objective sensations—sensations which can be perceived by anyone who is suitably conditioned to receive them—as for instance by sending rays of light into our eyes" (p. 12). By "objective sensations" is meant, I take it, the ordinary perceptual experiences found in any particular perspective. The object, and the experience, is what it objectively is from that standpoint and any other percipient entering that perspective would have an identically similar experience.

Lenzen⁹ believes that the physical order is objective, i.e., it may be known by several observers. The problem of science he conceives to be the description and correlation of aspects (perspective happenings) of reality. Any aspect is defined as a union of particular qualities, complexities, and relationships. The given and possible aspects can be described, Lenzen thinks, without raising the question of their subjectivity or their independent existence, but *possibility of experience* is always the physicist's criterion of reality—never an independent reality forever beyond the possibility of any experiential situation. Heisenberg has written that the problem of physics is merely to describe the formal connection of perceptions and while Planck¹⁰ believes that physics is seeking

⁷ Causal subjectivity means that the percipient partially conditions, at least, the existing event; existentially subjective means that the event has no existence when not given; epistemologically subjective means that the experience is not a disclosure of the intrinsic nature of the real object.

⁸ *The New Background of Science.*

⁹ *The Nature of Physical Theory.*

¹⁰ *Where is Science Going?* See his chapter "From the Relative to the Absolute."

for the absolute behind the relative, for the reality behind the appearance, he admits that this represents an *ideal* goal which is always ahead of us and which we can never reach.¹¹

I cite these scientists to strengthen my general conviction that objectivity is compatible with perspectivity and that objectivity, if it is ever to be established, must be established through perspectives, not by transcending them. Nearly all of modern philosophy has been haunted by the spectre of subjectivism, by a psycho-physical bifurcation in which private minds or percipients attempt to overcome their isolation and to know an objective order. I am merely suggesting that if we follow the modern scientist in his work, and if we see the subjective-objective polarity in its proper setting as a distinction arising within a larger whole, we may deny the artificial premises and the insoluble problem of getting from a private dream world to a conjectured nature thus disintegrates.

IV

A closer analysis of section one is now in order. It is insisted that two percipients, even if standing side by side, have numerically and qualitatively distinct percepts of a cognoscendum. Each is in a different perspective and each conditions the stimuli assumed to be coming from a common object of reference. Their percepts, therefore, must differ; they can not directly reveal the object and can not be located as on the object. They are, in short, *sensa*.

If we consider several people as at rest relatively to each other, we may think of them as occupying the same consentient set. If one of them moves relatively to the others, he now occupies a different consentient set. Strictly, measurements, distances, masses, would differ in the two sets and the familiar transformation equations would allow us to go from one to the other. But actually, the velocity of the person walking relatively to the others is so small that no differences in measurements could be detected in the two sets and the equations would tend to give identical results. In other words, we can clearly consider all as in the same set.

Now, to consider two percipients (in the same room) as having utterly different views, perspectives, and hence experiences, is a bit meticulous even for a philosopher. To my mind this threatens each percipient with complete insulation from the other; they have no common world at all (and hence no common, postulated cognoscendum) and every possibility of genuine knowledge is completely destroyed. This insistence upon the numerical and qualitative dis-

¹¹ Bridgman, with his Operational Theory of Concepts (*The Logic of Modern Physics*) would certainly insist upon the objectivity of what is disclosed within a perspective.

tinetness of the experiences of observers standing side by side thus overreaches itself and reduces to absurdity.

Here is the teacher of embryology. He puts a slide under a microscope having multiple eyepieces and, looking through one eyepiece, asks a student to look into the other and to describe what is seen. In this case, it is assumed that both men are observing the same object, the same things, colored area, etc. There is no belief that each observer has a private and different datum and that these *sensa* somehow refer to a common postulated object. Even when the student glibly identifies and describes parts which the instructor can not find, the latter hardly falls back upon the philosopher's explanation. He is much more likely to register something about being unprepared and not taking the work seriously enough. In this illustration, the object is what it is, the color and shape are where they are on the object, in the particular perspective under consideration. The magnified slide is as real as the slide when removed from the instrument. The experienced slide is real, objective, and what it is in each perspective. I do not believe, then, that Lovejoy's insistence upon the numerical and qualitative distinctness of experiences in closely related perspectives is valid; and further, if it were, it would negate any possibility of knowledge.¹²

Again, why should a perspective be defined as any relation between a percipient and the hypothetical object such that the percept which arises will be unlike the object as it is apart from the relation? If it is meant merely that the perceived object is not the unperceived object we hardly have a very damaging statement. This has been philosophically respectable for many years. But my criticism is that Lovejoy defines a perspective in such fashion that genuine knowledge of the object is precluded. The entire matter is prejudged and doomed to begin with. No wonder it is insisted that perspectives of this kind must be transcended in order to obtain knowledge. But since we are nowhere shown just how each and every perspective is to be transcended, the sceptical and agnostic implications of the doctrine are quite evident. However, it is unnecessary so to conceive perspectives. A perspective implies an object, a larger whole which is what it is from that particular viewpoint. There is no perspective apart from other perspectives and the common whole and if one changes the other is likewise different. On this theory, it can safely be assumed, with science and common sense, that the object may be truly revealed in any per-

¹² Lovejoy's position really involves the "fallacy of unipolarity." See W. H. Roberts' article in this JOURNAL, Vol. XXX (1933), pp. 262-268.

spective in which it can be experienced at all and really (objectively) is what it is from that viewpoint.¹³

I should insist that the characters (primary and secondary qualities) arising in a normal perceptual perspective are there where they are experienced, are objective, and are *physical*. For Lovejoy, the physical object is spatial and temporal; it is assumed to exist in between perceptions and nothing belongs to it solely by virtue of the occurrence of a perception. Again, let us observe the biologist looking into his microscope. He sees a certain differentiated, colored area. Ten minutes later he looks again. He is certain he sees the same area, the same color, the same general situation as was experienced earlier. There is no hesitancy in labelling the situation physical in Lovejoy's sense of the word. If *anything* has existed between perceptions, why not the colored, extended object which is experienced at one moment and is identified by the careful scientist at a later moment as the same object?

McGilvary¹⁴ curiously wavers at this point and finally decides that colors, while where and what they are experienced as being from a certain perspective, are not physical in the physicist's sense of the directly measurable. But certainly a colored patch in normal perception will reflect light rays which is one criterion that McGilvary accepts for the physical object.¹⁵ Why not say that if the area is physical so, too, is the color. Bishop Berkeley was correct in insisting upon the inseparability of the qualities.

¹³ Even certain epistemological dualists see the biological, survival, necessity of identifying sense-data with objects. It is a curious philosophy which sees the practical necessity for such identification, but refuses to do so in its speculative moments. See Daniel Cory's article in this JOURNAL, Vol. XXX (1933), footnote p. 42.

¹⁴ This JOURNAL, *ibid.*, p. 320.

¹⁵ There is a curious vacillation in the contemporary philosopher's appeal, first to naïve experience and then to the findings of the sciences, with contradictions, often, resulting. And there is no uniformity in appealing to either. McGilvary and Strong appeal to naïve experience to show that in a memory perspective the past as past functions as directly present. Lovejoy appeals to the common sense of the plain man to show that the past as past is never present in memory, but is always represented. Whitehead appeals to naïve experience to circumvent simple location while Lovejoy, appealing to the same naïve experience, shows that simple location can not be annulled. And Whitehead, wanting to emphasize the world as a flow of events, calls the static, timeless element of Cleopatra's needle (which naïve experience would pronounce real) a pure illusion due to the practical purposes of daily intercourse. R. B. Perry has pointed out the high fallibility of common sense and Durant Drake (in his *Invitation to Philosophy*) shows the hopeless inadequacy of naïve realism. Dewey and Cohen disagree as to the nature of experience; while in the name of naïve experience scientific objects are often labelled mere mathematical variables and denied physical reality. The reader will recall further examples.

The subject of error needs discussion. If a scientist observes something which other scientists are unable to observe under the same conditions (in the same or identically similar perspectives) the so-called experience is labelled subjective and erroneous. The scientist's standard object, which Lovejoy seeks, is found within a perspective which scientist after scientist may enter. It is not some constant, hypothetical object synthesized by actual or imaginative access to all the possible perspectives of the object. Within one standpoint a colored patch is found. If others find it (and are in agreement as to what is found) in that perspective or in such nearly adjacent perspectives that they may actually be considered one, the colored object is objective, physical, and the experience veridical.

If several travelers in a desert see a mirage, their experience is to be taken for what it is. They all have the same general experience; it is objective and physical. Error might arise if they were to assume from their immediate perspective that upon going ten miles to the west a lake would be found in that (now distant) perspective. In other words, error arises in the transfer of the experience found in one perspective to that of another. This is the field of ideation and hypothesis and as such is subject to error. What is in one perspective is truly there as attested by any number of observers. That it will *also* appear from a quite different perspective is not at all certain. This suggestion is to be checked up by later experience, by going to the new perspective. If it appears, the belief that it would appear from the new standpoint is found true; if not, it is erroneous.

It is unnecessary to go to the manipulatory area or perspective, as does Professor Mead, to find the standard object, or to correct and dispel error. For there is no guarantee that tactile perceptions are absolutely free from error and it is impossible and unnecessary to reduce many visual or other perspectives to the manipulatory area. And further, while there is a close relation between perceptual and tactile perspectives, yet the one is never a substitute for the other and a true, objective, experience in one (sight of a distant object) may never lead to the other where it may be checked against possible illusion. And such is unnecessary, for observers in one perspective do not need to reduce the objective reality found there to a manipulatory perspective to check against error. If several observers in one visual perspective, or in several closely related visual perspectives, agree upon a certain experience, this is taken as objective and veridical within that perspective. It is unnecessary to transcend it and move to a quite different viewpoint. For another criterion would have to be set up in that per-

spective. There is no guarantee that shifting perspectives will automatically enable us to detect error.

The point is that a standard object may be found, and error may be detected, within an auditory, a visual, or a manipulatory perspective. In stellar spectroscopy, an observer may (looking into his finely adjusted instrument) be undecided as to the reality of a faint line which he thinks he sees. The uncertainty is banished and truth or error established by more looking, by calling upon colleagues to observe, by establishing identical conditions at a later time, etc. While there is manipulation (adjustment of instruments, etc.) the reality of the line is established within the visual perspective or not at all. If several percipients see a meteor flash and agree in general about the occurrence, the experience is taken as a true, objective, physical happening and, again, no appeal to the manipulatory area is necessary or possible.

Thus, I believe, error may be explained and objectivity (invariance) found within experienced perspectives; it need not be assumed that each percipient is confined within his own peculiar and private sense datum which must somehow be transcended before genuine knowledge of a never-to-be-experienced cognoscendum is possible. It is not objectivity but obliteration which begins where perspectivity ends. Genuine knowledge always takes place from some particular standpoint.

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OBJECTIVITY OF ESTHETIC VALUE

THE use of the words "objective" and "subjective" for various types of value is in many cases so ambiguous that no single criterion is left by which it is possible to determine to which of the categories a given event belongs. The words are used so frequently and naturally, however, in the theory of value that they will be retained in the present context in the hope that the meaning assigned to them, in spite of its origin in the psychological laboratory, will be not only clear, but also acceptable to philosophy and to common sense. Any psychological process or object will be regarded as objective if the conditions for its occurrence can be sufficiently described in terms of the physical properties of the stimulus. Images, interests, attention, ideas aroused through association, and such events, can not be adequately accounted for in terms of stimulus-properties; sounds and colors can be. The former may therefore be called subjective, the latter objective.

Even when the words have been clearly enough defined, there

has still been unfortunate disagreement as to the classification of certain types of experience. Esthetic value in particular has been tossed freely back and forth. Authors who have wanted to include all value in one category have often hesitated or made exceptions about esthetics, and the exceptions have received diametrically opposite classifications. Professor Laird, for example, who argues for the objectivity of all value, after pointing out how obvious it is that objects wear their value just as they do their colors and sounds, remarks that such statements "require a defence, and I hope to give one (*with certain reservations concerning beauty*). The most formidable lion in my path is the common and most pertinacious attempt to prove the subjectivity of all values. *Aesthetics gives the strongest case for this argument*, but the subjectivists also attempt to annex the whole province of morals."¹ Professor Perry, on the other hand, is inclined to think that esthetics, if uncritically regarded, offers the weakest case for the subjective argument. "The view that good is a simple quality observably present in objects would scarcely be held at all were its exponents not exclusively pre-occupied with the contemplative and esthetic values. *Here there is a certain seeming evidence in its favor*. Its inadequacy is too palpable when one passes on to other regions."²

Evidently it is not completely obvious whether esthetic value is subjective or objective. For that reason it may be profitable to make use of a criterion which goes beneath the untrustworthy appearance of the surface. An esthetic quality which furnishes widespread delight may be regarded by one individual as an immediate property of the object of art itself. The same quality may strike another individual as having a subjective origin. The proper disposition of the quality would therefore seem best decided by an appeal to factors not subject to the vagaries of individual judgment. If it can be demonstrated that the quality in question varies uniformly with certain changes in the stimulus, that relationship may be appealed to as the criterion for objectivity. The redness of an object clearly shows just such a dependence on the stimulus. It is not the stimulus, however, which determines that red shall mean danger or the stopping of traffic. Any other wave-lengths could acquire the same meanings. These meanings therefore do not satisfy the criterion for objectivity.

The following simple illustrations are not intended as proof that all esthetic value is objective. There may be a very considerable range of esthetic qualities which does not meet the test of the criterion here proposed. The extent to which the criterion does

¹ J. Laird, *A Study in Realism*, 1920, p. 126. Italics mine.

² R. B. Perry, *General Theory of Value*, 1926, p. 33 f. Italics mine.

hold, however, may be taken as evidence in favor of a certain nucleus of objectivity in esthetic value. How wide the nucleus of objectivity, or how narrow the margins of subjectivity, are questions which must wait upon the accumulation of careful observations. The examples here cited are confined to music partly for the sake of brevity and coherence and also because the writer is less familiar with other fields. The same criterion is unquestionably applicable, however, to the other arts, although presumably in varying degrees.

The various sensory dimensions of tonal material are surely objective in the sense in which the term is here used. They vary uniformly with certain changes in the stimulus, and although the relationship is not a simple one-to-one affair, it nevertheless permits of fairly precise quantification. Recent investigations of the limens of pitch-discrimination indicate that for frequencies between 500 and 4000, at an intensity-level of 40 decibels, the minimum fractional difference in frequency which is perceptible is 0.003.³ The fractional changes are higher at the ends of the tonal scale. If this value is translated into cents⁴ for the sake of easier comparison with intervals, which have the same relative values at all parts of the scale, the result is very close to 5 cents. This value is slightly higher than that obtained in older researches, but the discrepancy is undoubtedly due to differences in apparatus, control of intensity, and method of securing and calculating the judgments rather than to any subjective shifts in the sensory material itself. As soon as the nature of auditory nerve-action is fully known it will be possible to account completely for pitch in terms of neural and stimulus-conditions. The introduction of any subjective factor into the account is quite unnecessary, unless one were to mention the intent on the part of the observer to report pitch. But since there is no psychological datum whatever which can be reported accurately unless the observer is set to make the report, this factor can be ruled out as a constant. Corresponding figures and statements could be offered for other tonal dimensions. The example from pitch, however, will be sufficient.

Pitch when taken in isolation is, to be sure, not music. There can be no music without pitch, however, so that although the two are not interchangeable, neither are they unrelated. If the stuff of which music is made is thoroughly objective, it is not too unreasonable to suppose that the more strictly esthetic characteristics of music also have something objective about them. When tones are combined into intervals, the listener is confronted with qualities which although very simple esthetically are nevertheless truly musi-

³ H. Fletcher, *Speech and Hearing*, 1929, p. 152.

⁴ A cent is 1/100 of a tempered semitone, or 1/1200 of an octave.

cal. Are tonal intervals dependent on stimulus-variables in the same way that single tones are?

Ever since ancient times the relation of tonal intervals to stimulus-ratios has been known. Even those almost wholly unacquainted with the physical basis of sound know that the octave has something to do with the ratio 1:2, the fifth with 2:3, the minor sixth with 5:8, and so on. The widespread knowledge of these ratios and the frequency with which they are quoted have undoubtedly had a good deal to do with the popular notion that music and mathematics are at bottom pretty much the same thing. The physical ratio, however, only defines what might be called the ideal interval. In practice the perceived interval may remain unaltered through a considerable range of ratios above and below the one by which it is usually designated. Only recently have efforts been made to determine the range of variability of the musical interval. When an interval is judged in its own right as a major third, a minor seventh, an augmented fourth, and not as a tonal complex in which either one of the two tones may be observed separately with respect to slight changes, it turns out that the fineness of discrimination is not nearly so great as that for single pitches. A tone in the middle region of the scale is recognized as having changed if it is altered by an amount greater than 5 cents. The ratio of an interval, on the other hand, may change as much as 20 cents without altering the phenomenal character of the interval.⁵ The individualizing quality of every musical interval is thus functionally determined not by one exact ratio, but by a limited range of ratios. The fifth, with its peculiar flat, commonplace quality, remains psychologically the same from about 690 to 715 cents, although the just Pythagorean fifth is defined as 702 cents. The tempered major third is 400 cents, but ratios not too far above or below this value still produce the rich, vibrant character of that very pleasant musical interval.

In the case of musical intervals therefore it is again unnecessary to have recourse to any subjective factors to account for their psychological effects. The conditions for these effects can be described sufficiently in terms of the physical properties of the stimuli. Chords of three or more tones, with all their elaborate array of musical differences, must also move within equally rigidly determined ranges of frequency ratios. But it staggers the imagination to consider the complications one would run into in trying to work out the psychophysics of the massive chordal effects achieved by Reger or Bruckner.

When one turns from the perpendicular to the horizontal dimen-

⁵ H. Moran and C. C. Pratt, "Variability of Judgments on Musical Intervals," *Jour. Exper. Psychol.*, 1926, 9, pp. 492-500.

sion of tonal patterns, esthetic effects of much greater variety make their appearance. Rhythm, accent, changes of tempo, dynamics, subtleties of phrasing, all superimposed upon the sequence of tones themselves, makes possible a well-nigh inexhaustible temporal kaleidoscope of sound. Here it is, if not in the simpler tonal materials, that subjective processes are said to throng. It must be admitted at once that for some listeners melodic phrases, with or without harmonic accompaniments, are frequently suffused with various images and associations, and that the character ascribed to these phrases derives in some measure from such subjective supplementations. The possibility still remains, however, that there is a fundamental tonal organization in such phrases which yields an esthetic character in no way dependent upon suffusions unrelated to the stimulus-conditions.

The application of the criterion for objectivity to most musical structures is very difficult. It can only be hoped that the discovery that it holds in rather simple instances may be regarded as an indication of the way the results would go if it could be applied to more elaborate musical designs. Certain musical phrases as they approach the last note give a feeling of finality, other phrases are much less final, and still others leave one with a feeling of complete suspense. Are the characters thus ascribed to these cadences the result of musical tradition and association and of erroneous imputations on the part of listeners who confuse the way they feel with the way the music sounds? Or is finality, an auditory organization which requires no gratuitous gifts from generous listeners?

Finality is a function of four stimulus-variables: width of interval, falling inflection, simplicity of ratio, and power of two. If three of these factors are kept constant and the fourth varied, a generalization can always be stated in terms of each of the variables to the effect that of two sequences of tones the more final one is that in which (1) the difference between the frequencies of the last two notes is smaller, (2) the order of frequencies is from greater to smaller, (3) the last two notes sustain the simpler ratio, or (4) the power of two occurs on the last note.⁶ In actual musical practice more than one variable, of course, may operate in a single cadence, so that it becomes necessary to devise a scheme of weighting in order to assign relative strengths. In no case, however, in the judgments on which these results were based was it necessary to introduce an explanatory factor other than the four stimulus-variables. Observers who make such judgments not infrequently mention other processes which they seem to detect during the formulation of the

⁶ From an unpublished manuscript by K. E. Zener in the Harvard College Library.

judgment. Kinesthetic strains and relaxations, rising and falling visual images, and vague ideas of repose and calm, indecision and irresolution turn up all the time.

Elaborate theories of melody, as well as of everything else psychological, have been built up on the basis of motor and other types of empathic appendages. The thesis here maintained is that recourse to such factors is not only unnecessary, but is also in violation of the principle of scientific parsimony, unless the stimulus-conditions fail to furnish an adequate account of the determinants of the phenomenal event. A loud sound often makes a person jump, but the sound is not best explained in terms of jumping.

The only way to make reasonably certain that the criterion for objectivity holds for a given event is to find out whether the event varies uniformly with certain changes in the stimulus, as when pitch varies with change of frequency or intensity with change of amplitude. As has already been said, most musical compositions of any degree of complexity preclude such a test. The stimulus-conditions are far too numerous and too difficult to control. An approximation to the criterion is to be found, however, in the uniformity with which a fairly large number of individuals ascribe a given character to the same composition. High unanimity of opinion may be taken as an indication that the judgments have been determined by intrinsic characters of the composition rather than by extrinsic and variable associations. To ask blindly what a composition sounds like is of no use. Uncontrolled associations may lead to a maze of confused replies. Even if associations are excluded, the composition itself may and probably does have many aspects, so that individuals offer very dissimilar judgments or the judgments of the same individual at different times are unlike. One way to circumvent some of these difficulties is partially to force the judgment by limiting its scope—a perfectly legitimate procedure, inasmuch as an undirected attention over against a multiplicity of aspects is bound to issue in meaningless equivocality.

The results of such a procedure are presented in Table I. Parts of four compositions were played on records to a group of 227 undergraduates: the introductory measures of Brahms' First Symphony, fifty measures or so at the beginning of Mendelssohn's Overture to A Midsummer Night's Dream, the short-Adagio which precedes the last movement of Mozart's string Quintet in G-minor, and about fifty measures toward the end of the third movement of Tschai-kowsky's Sixth Symphony. At the same time four adjectives were written on the blackboard: "sprightly," "stately," "vigorous," and "wistful," and the students were requested to listen to the compositions once, and then, on second hearing, to assign to each composition the adjective which most fittingly characterized it.

If the compositions made no revelation of the characters designated by the adjectives, each of the adjectives would be assigned about 25 per cent. of the time to each composition. The table shows how far this was from being the case. The unanimity of judgment exceeded the most sanguine expectations. Not one of the preponderant assignments fell below 90 per cent., and the measures from Mendelssohn received practically 100 per cent. of judgments in the same direction.

TABLE I

PERCENTAGE OF CASES IN WHICH THE ADJECTIVES IN THE HORIZONTAL COLUMN WERE JUDGED APPROPRIATE TO COMPOSITIONS BY THE COMPOSERS LISTED IN THE VERTICAL COLUMN

Total number of cases 227.

	Stately	Sprightly	Wistful	Vigorous
Brahms.....	91.20	0.00	3.08	5.72
Mendelssohn.....	0.00	98.67	0.00	1.33
Mozart.....	3.09	0.00	96.91	0.00
Tschaikowsky.....	5.72	1.77	0.00	92.51

The students were set to judge each composition in one of only four different ways. Such a predisposition can hardly be regarded as prejudicial, however, for it was still necessary to make a choice. In this way it was possible to discover whether factors other than those of chance would operate. If the students had been merely asked to characterize the compositions in any way they saw fit, the replies would have been fantastic. And yet just such loose opinions given by free association form part of the basis for the common belief that the esthetic judgment is entirely a matter of individual taste,—and therefore, subjective.

It is still possible to argue, of course, that the students were ascribing their own associative or emotional experiences to the music. The method gives no guarantee against such a pathetic fallacy. One must then assume in this case that these compositions, with which many of the students were relatively or completely unfamiliar, were capable of arousing the same associations in nearly all the listeners—a most dubious assumption. With respect to emotions and moods, it is still more unlikely that such a large group of undergraduates would experience such homogeneity of feeling. It is more than probable that, aside from the pleasure of listening to the music, the majority felt nothing at all, unless perhaps it was amusement or boredom over the whole experiment. These young people were not reporting upon their sprightly feelings, their wistful moods, or their stately affections. They were selecting from the list presented

to them those words which best described the auditory structures of the music to which they were listening.

It is a fact all too frequently overlooked that experiences in one sense department may be duplicated, as far as their *form* goes, in another modality. A rhythm may be either visual, tactual, or auditory. Certain bodily disturbances may very fittingly be described as agitation, and the experience thus specified is surely subjective, emotional. Various visual and auditory patterns, on the other hand, such as the waves of the sea in a storm or the sounds of a cyclonic wind, may also be described as agitated, and the experiences thus designated are no less surely objective, non-emotional. Words are poor instruments at best to describe the innumerable patterns of phenomenal experience, and in many cases the same words must serve the multiple purpose of labeling patterns from several different sense departments.

One of the confusions from this verbal ambiguity is shown in the difficulties which have come down from ancient times over the proper theoretical disposition of the esthetic or subtler emotions. Many of these so-called emotions do not seem full-blown nor real, but if they are not emotions or feelings, what are they? If they occur in the visual and auditory fields, if especially they are present in the contemplation of works of art, it is very likely that they are objective phenomenal structures which, because of the striking resemblance they bear to the formal outlines of bodily reverberations, are erroneously included in the subjective category of emotion. Strictly speaking, however, they are not emotions at all. They merely sound and look the way emotions feel.

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BOOK REVIEWS

Das Leben der Philosophen. WILLY MOOG. Berlin: Junker und Dünhaupt. 1932. 253 pp. RM. 10.

This is Part 8 of a series edited by the author, *Geschichte der Philosophie in Längsschnitten*, which is a set of histories of various branches of philosophy. The prior parts include: (1) *Geschichte der Wirtschaftsphilosophie* by Surányi-Unger (76 pp., price in marks, 3.60), (2) *der Metaphysik* by Max Wundt (131 pp., 6), (3) *der Ethik* by Max Wentscher (119 pp., 5.50), (4) *der Logik* by Heinrich Scholz (88 pp., 4), (5) *der Rechtsphilosophie* by C. A. Emge (79 pp., 3.60), (6) *der Aesthetik* by Emil Utitz (82 pp., 3.60), (7) *der Naturphilosophie* by Hugo Dingler (180 pp., 8). In process of publication are further similar histories: *Erkenntnis-*

theorie by Richard Höningwald, *Wertphilosophie* by Oskar Kraus, *Psychologie* by Friedrich Sander, *Charakterkunde* by Hans Prinzhorn, *Staatsphilosophie* by Arnold Bergsträsser, and *Geschichtsphilosophie* by Johann Thyssen. It is altogether a typical product of the German passion for handbooks and summaries, and one not without value.

The present volume is a sketch of a complete history of philosophy, rather fuller in biographical detail than an ordinary history. The proportions are good, but seem as if laid out by the author in advance, so that the more biographical detail he finds, the less space is left for the subject's philosophy. Hegel's philosophy, for instance, is only hinted at, while some of the Greeks are discussed rather fully. The author is at his happiest from Descartes to Kant, and displays a freshness of presentation which is rather pleasing throughout; but it is difficult to make a personality live in a couple of paragraphs. Though the author brings the story down to 1931, about sixty-nine and a half out of the last seventy pages are devoted to German philosophy. Not a word of apology does he make for this rather naïve scale of evaluation. The later biographies tend to become mere lists of names of German universities at which the Herr Professor Doktor in question did his teaching. But even so, the later section has its value as a check-list of recent German philosophy. The work as a whole will be of use to students looking for a survey of philosophy in German, well written and in brief compass. A few slips and misprints have escaped the proofreader.

H. T. C.

La Spiritualità dell'Essere e Leibniz G. E. BARIÉ. Padua: Casa Editrice Dott. Antonio Milani. 1933. Pp. vi + 553. L. 57.

In the development and defense of his own philosophic ideas Leibniz found occasion to characterize and criticize the doctrines of a vast number of his contemporaries and predecessors, and there is contained in his work, therefore, a reflection of a good portion of the history of philosophy viewed from the Leibnizian standpoint. S. Barié's study can be described by saying that he takes advantage of this circumstance to approach the study of Leibniz's philosophy by way of his criticisms of philosophers. Beginning with the Renaissance, which S. Barié views in a thoroughly conventional fashion, with Giordano Bruno whom he takes to be typical of the Renaissance and Nicholas of Cusa whom he presents as a precursor of Bruno, and at a further remove Leibniz, he proceeds by way of the Cartesian Logic and the Spinozistic Logic to the systematic reconstruction of the philosophy of Leibniz. In this reconstruction a

great diversity of material is brought together with considerable dexterity; broadly, the order is chronological, yet the sequence of subjects is systematic; one by one the major disputants, opponents, and controversies, with no important omissions, make their appearance, yet in the midst of the history a concise and accurate statement is made of the important doctrines that emerged from the discussion. Usually, in any one book concerning Leibniz, he emerges as a logician, a physicist, a mathematician, or a theologian; S. Barié has done uncommonly well by all the personations of Leibniz and by all his activities, the presentation of the physical doctrine, incidentally, being particularly well done, though brief. Yet when he passes beyond the task of exposition and the organization of a complex subject-matter, our author is not a sure guide; in one direction it is remarkable how consistently Leibniz's criticisms of his opponents are correct and how frequently his predecessors required just the supplement and alteration which Leibniz was to supply to their doctrine; and on the other hand, no less remarkably, a post-Kantian terminology and a set of problems which were to emerge in later idealism persistently crowd into the narrative to supplement Leibniz. In one important respect, moreover, S. Barié did not take the pains to match his scholarship with that of Leibniz; there is no review of his reflections on the ancient and medieval philosophers to match the review of his controversies with the modern philosophers, and of all Leibniz's erudition in medieval philosophy the only indication here is in some passing references to Augustine on the problem of evil. S. Barié has not accomplished (what is perhaps an impossible task) the statement of the complex philosophic activity and production of Leibniz, but he has prepared a well-conceived and very useful scheme of the spread and articulation of that activity in the problems and doctrines of the seventeenth century.

R. McK.

Hegels Tübinger Fragment. GUNNAR ASPELIN. Lund: Hakan Ohlsson. 1933. 72 pp.

This little study is published in a Lund University series, but it is written in German. It deals particularly with a manuscript which Hermann Nohl has assigned to Hegel's last year at Tübingen (1792-1793), and has published as the first of a series under the heading "Volksreligion und Christentum" in his collection of *Hegels Theologische Jugendschriften* (pp. 3-29). But Aspelin's study serves quite well as a brief introduction to the development and motivation of Hegel's early thought as revealed by recent German scholarship in such basic works as: Wm. Dilthey, *Die Jugend-*

geschichte Hegels; Fr. Rosenzweig, *Hegel und der Staat*; and Th. L. Haering, *Hegel, sein Wollen und sein Werk*.

While Aspelin regards Haering's book as "das Standardwerk," he takes issue with it in two specific points. Against Haering's views he argues that: (1) Hegel still adhered to the Kantian ethics when he wrote the Tübingen manuscript, and valued it as a basis for political and religious reform (cf. pp. 38-46); and (2) Hegel does not regard the "Volksgeist," at this time, as "eine rein geistige Grösse," but as a spirit connected with the soil of a people and with their natural needs by a thousand ties (cf. pp. 59-60).

H. L. F.

La Psychologie Bergsonienne. ROGER-E. LACOMBE. Paris: Félix Alcan. 1933. 324 pp. 30 francs.

M. Lacombe's critical study of Bergson's psychology is both thorough and single-aimed. In masterly fashion, he separates the metaphysics of Bergsonism from the observed facts of introspective psychology, and is always careful to do full justice to what he conceives to be his author's achievements. He recognizes the liberating effect of the metaphysics upon the minds of the generation to which it was first presented, but maintains that instead of being constructed from the facts of psychology, it tended to dominate their formation. (He does not go into the question of whether any other procedure was possible.) Much of Bergson's criticism of the psychology of his time, though not all, he accepts. He accepts also his distinction of the two types of memory, maintaining, however, that it is too simple; his theory of perception as a preparation for action; his views of invention and volition. Though not a parallelist himself, M. Lacombe does not believe Bergson's attack upon parallelism to have been successful, nor can he agree to the theory of psychic intensity and duration. One of the best accomplishments of this book is its analysis of Bergson's method, a knowledge of which would seem to the present reviewer of great help to American students of philosophy. It is also worth inviting the attention of possible readers to the unfailing courtesy of this critical study and to its literary distinction.

G. B.

Consciousness: Brain Child. PERCY A. CAMPBELL. East Cleveland, Ohio: The Caxton Co. 1933. 109 pp. \$1.50.

Mr. Campbell has dedicated his dively and ingenious little book "To Nature, Whose Ace Organism is *Man* and Whose Ace Phenomenon is *Consciousness*." His intention is to portray consciousness as a phenomenon of the brain, "a thing of the body, bodily"

but also "of the cosmos, cosmic." He identifies consciousness with "the subject-predicate liaison" and endeavors, with the aid of an especially devised terminology, to show that such relationships are "adaptive epiphenomenal reactions of the brain, and lead to adaptive organismal behavior in a large way."

The mind-body problem has a way of tempting investigators into broad and sometimes rash generalizations and Mr. Campbell's final characterization of conscious activity as "a logical, Tower-of-Babel-like, flesh-and-blood, closed system of mutually-associated, mutually-resuscitating cerebral functionings *en rapport with the world*" is at least as lucid as those offered by some of the more solemn and academic philosophies of the day. But the applications of this theory add little to the familiar case for epiphenomenalism and the treatment is at once too simple and too metaphorical to be really enlightening.

Mr. Campbell has previously published works on *A Non-Euclidean Theory of Matter and Electricity* and *The Game of Mind*.

A. E. M.

The Psychology of Laughter. A Study in Social Adaptation.

RALPH PIDDINGTON. London: Figurehead. 1933. 227 pp.

Theories of laughter are generally no laughing matter. They have all the apparatus of solemnity without the seriousness of an argument at once clear, convinced, and convincing. They seem, like the present work, interested mainly in doing two things, giving an historical account of previous theories with special reference to their inadequacies, and offering a new theory which is supposed to account for some aspect of laughter not taken into consideration by previous writers. This book of Mr. Piddington's follows the established and by this time depressing formula. As a history it is at once reliable and stereotyped. There is, so far as the present reviewer could discover, nothing new and little that is provocative in the running criticism of theories whose actual content is traversed in a group of appendices. As a reference book, the historical accounts of laughter from Plato through Max Eastman (taking in everybody from Hobbes through Sully, Bergson, and Freud) is useful enough. There is not much, however, that Max Eastman has not considered in his volume, with the exception of Renaissance revival of classic theories of laughter and Elizabethan criticism of comedy, notably in Ben Jonson, as a correction of the follies of mankind. The author is concerned to distinguish elementary or purely biological laughter, i.e., that of infants, from laughter at the "ludicrous" or the "funny," which seems to him socially conditioned. "Laughter at the ludicrous, then, arises fundamentally

from the multiplicity of social evaluations and the possibility of conflict between them."

"Society" takes over, according to the view here presented, a biologically determined reaction. The laugher laughs; he does himself good biologically and does not do the harm he might do by other reactions than laughing. He can, according to our author, laugh or have an anti-social neurosis.

It is all plausible enough, but this reviewer is confirmed in the suspicion that Penjon, cited by the author, is correct: "S'il est une chose au monde dont on se soucie peu, c'est de savior en riant pourquoi on rit." The philosophers and psychologists certainly do not tell us, and they had almost best give it up as a bad business, save perhaps to traverse the varieties of mirth, as James did the varieties of religious experience.

I. E.

Logik, Mathematik und Naturkennen. HANS HAHN. (Einheitswissenschaft, Heft 2.) Wien: Gerold & Co. 1933. 34 pp.

This pamphlet contains the substance of two lectures in a cycle given last year in Vienna with the object of raising funds for a tombstone for Ludwig Boltzmann. Its author is the eminent professor of mathematics at the University of Vienna, and a prominent member of the "Wiener Kreis." The lectures state simply, though not always convincingly, the cardinal tenets of the logical positivists: there are no material *a priori* propositions; propositions of logic and mathematics are "tautologies" which legislate for the manner in which we *represent* things, but say nothing about the things themselves; statements about the world incapable of direct verification do not stand for genuine propositions; expressions containing terms not ultimately translatable in terms of direct experience are "metaphysical," and so meaningless; truth is not an intrinsic property of propositions, but must be taken as identical with verification. Thus the strange irony of history is exhibited once again. The epoch-making researches on the foundation of mathematics begun last century in the spirit of an extreme type of platonism, has culminated in a nominalistic philosophy of logic and a pragmatic theory of truth. It is unfortunate, however, that American pragmatists have so little taste for formal analysis that, with a few exceptions, they have not learned to use the keen-edged instruments which have been forged for them by the analytic logicians at Cambridge, Berlin, and Vienna.

E. N.

BOOK REVIEWS

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Gedanken zur Naturlehre. HERMANN BURG. Bern-Berlin: Hans Huber. 1933. 72 pp. RM. 2.25.

The author's main idea, a sort of Cartesian theory of vortices applied to protons and electrons, speaking of the world of physical nature as a set of streams in a spatial continuum, appears to be of very modest value either as science or as speculation, nor do his comments by the way add much.

H. T. C.

An Idealist View of Life. S. RADHAKRISHNAN. New York: The Macmillan Company. 1933. 351 pp. \$4.00.

The volume comprises the Hibbert Lectures for 1929, with some additional material; and the general aim is to restate idealism, both as a philosophic position and a religious attitude, in the light of recent intellectual and social developments.

The first chapter sets forth in an unusually comprehensive way the many-sided challenge to religion in modern culture. The second chapter considers the substitutes for religion, such as naturalistic atheism, humanism, and pragmatism; and the grounds for their rejection are given in a rather summary and dogmatic fashion. The third chapter is an excellent, moderate account of religious experience, without which, the author maintains, religion lacks all foundation. The fourth and fifth chapters, perhaps the best in the book, deal with intuition, both historically and critically; and the presentation is really an impressive defense of this kind of knowledge, which has received scant attention from the present scientific age. The next two chapters are devoted to the scientific or empirical explanation of the universe, with the design of showing how this is consistent with the religious attitude; and the final chapter gives a view of ultimate reality which attempts to do justice to both sides.

The book may be described as mysticism made reasonable, and is certainly a significant contribution to the subject, by an author who is probably unique in his mastery of both Hindu and Occidental philosophy.

R. S.

Communal Pietism among Early American Moravians. J. J. SESSLER. New York: Henry Holt and Company. 1933. 265 pp. \$3.50.

This thorough and well-documented monograph, the eighth in the American Religion Series of the Studies in Religion and Culture, presents an extraordinary case-history in social religious pathology. With a wealth of explanatory detail, it recounts the little-

known story of the heroic and fantastic attempt of the followers of Count Zinzendorf, "assembler of souls," and Bishop Spangenberg to set up a pure "Church of God in the Spirit" in Pennsylvania about 1740. In the course of the narrative, illumination is thrown upon such diverse topics as church federation, the religious use of the lot, economic problems under communism, Christocracy, vocational education, missions, erotic symbolism, and a scarcely believable blood-mania. The author, whose firm command of his materials is impressive, takes care to include both the European background of the Moravians and their more recent history in America. The tendencies described no longer prevail, and their theological vagaries are of little current relevance; but no student of pioneer life in America and of religious and sociological extravagances can afford to overlook Dr. Sessler's account. It contains both a bibliography and an index.

H. A. L.

Henry Philip Tappan. Philosopher and University President.

CHARLES M. PERRY. Ann Arbor: University of Michigan Press. 1933. xi + 475 pp.

This is a valuable contribution to the history of American philosophy and education, not only because it brings together the biographical information concerning an interesting mind, but also because it contains odd bits of illuminating comment on the American intellectual milieu from 1830-1870. As Professor of Intellectual and Moral Philosophy at New York University, Tappan was one of the first in America to welcome idealistic philosophy, and as first President of the University of Michigan, he attempted to lay the foundations of genuine university scholarship and liberal culture among western pioneers who disdained such "codfishy" taste and ideals. Professor Perry has taken pains to recover the issues of that time and to evaluate Tappan's contributions in terms of them. Of special interest to philosophers are Tappan's *Doctrine of the Will Determined by an Appeal to Consciousness* (1840), which was among the first works in America to make generous use of transcendentalism in ethics, especially of the philosophy of Cousin; and his *Elements of Logic* (1844), which was based largely on the contemporary works of Whewell, Herschel, and J. S. Mill. The contrast drawn by Professor Perry between Francis Wayland and Tappan is one of the best features of the book. Whether it is more unfair to Plato or to Tappan to treat the latter as a Platonist is difficult to tell. It is clear, however, that Tappan was a real individual and philosopher in his own right who can not readily be catalogued, and the memory of whom as a person is justly worth preserving.

H. W. S.

JOURNALS AND NEW BOOKS

PHILOSOPHICAL REVIEW, Vol. XLIII, 1. Philosophy in France, 1932: *André Lalande*. Contemporary German Philosophy: *Arthur Liebert*. Clauberg and the Development of Occasionalism: *A. G. A. Balz*. Discussions—DeWitt H. Parker on Reflexive Relations: *R. F. A. Hoernlé* and *Louis A. Kattsoff*. Paul Weiss on Alternative Logics: *C. I. Lewis*.

INTERNATIONAL JOURNAL OF ETHICS. Volume XLIV, No. 2. The Issue in the Higher Learning: *R. M. Hutchins*. The Poverty of Power: *C. E. Merriam*. The "Ego-Centric" Fallacy in Axiology: *W. P. Warren*. Sociology and Suffering: *Leopold von Wiese*. Discussions—An Attempt to Measure Happiness: *A. E. Morgan*. An Attempt to Discover Change in Moral Attitudes of High-School Students: *J. K. Johnson* and *Kingsley Davis*.

PHILOSOPHY. Vol. IX, No. 33. Mechanism, Purpose and the New Freedom: *W. McDougall*. Some Points in the Philosophy of Physics: Time, Evolution and Creation: *E. A. Milne*. Sir Arthur Eddington and the Physical World: *W. T. Stace*. Cartesian Mechanism: *S. V. Keeling*. Goethe's Phenomenological Method: *F. Heinemann*. The Basis of Society: *A. H. Kiamat*. Philosophical Survey.

Burrow, Trigant: Crime and the Social Reaction of Right and Wrong. Reprinted from the *Journal of Criminal Law and Criminology*, Volume 24, No. 4 (1933), pp. 685-699.

Candlin, Clara: The Herald Wind. Translations of Sung Dynasty Poems, Lyrics, and Songs. With an Introduction by L. Cranmer-Byng. (Wisdom of the East Series.) New York: E. P. Dutton & Co. 1934. 113 pp. \$1.20.

Lord Chalmers: Buddha's Teachings. Being the Sutta-Nipāta or Discourse-Collection. Edited in the Original Pali Text with an English version facing it. (Harvard Oriental Series, edited by Ch. R. Lanman, Volume 37.) Cambridge: Harvard University Press. London: Humphrey Milford. 1932. xxii + 300 pp. (A new translation and a critical text of the earliest corpus of primitive Buddhist doctrine.)

NOTES AND NEWS

INVITATION TO THE EIGHTH INTERNATIONAL CONGRESS OF
PHILOSOPHY IN PRAGUE, 1934

By vote of the Permanent International Committee of the 8th of September, 1930, in Oxford, the next International Congress of Philosophy will take place in Prague, Czechoslovakia, in 1934.

After consultation with many friends abroad, the Organizing Committee fixed the date of the assembly

THE 2-7 SEPTEMBER, 1934

and has the honor to invite to the Congress all members of the last Congress, all philosophers by profession, all those who in the sphere of their work are interested in philosophy. It invites especially men of science, pedagogues, technical men, social workers, clergymen, artists, writers, editors, politicians, in short all who expect from philosophy help for the work in which they are engaged.

THE AIMS OF THE CONGRESS

An international congress offers an extraordinary opportunity for those interested in the progress of thought. The Congress should demonstrate the international unity of science, reaffirm our belief in Plato's view of philosophy as the queen of knowledge, give account of recent achievements in the field of thought, and by means of free discussion outline the programme of philosophy for the near future.

Naturally every friend of philosophy is welcome at the Congress. From the active members, however, the Congress expects the following help: a free analysis of the international intellectual situation, criticism of the prevailing philosophic ideas in relation to the needs of life (i.e., the life of science, literature, the arts, morals, politics, economics, social and religious needs); a critique of the present day aimed at a directive programme for the future; an analysis of the influence of philosophy upon public affairs since the World War; proposals concerning the teaching of philosophy; a demonstration of philosophical endeavors aiming to formulate the future of humanity. Of the greatest importance for the Congress, therefore, will be information about achievements in these directions in various countries and about what is planned for the future; proposals for eventual reforms; criticism of philosophical tendencies most influential just at present; discussion of the true message of philosophy; resolutions. The meetings of the Congress should bear less the character of lectures *ex cathedra* than that of negotiation and discussion."

To facilitate the dealings of the Congress, the Organizing Committee submits the following

PROGRAMME:

The meetings will take place every day from 9:30 to 19:30, Thursday, September 6, afternoon being left free. There will be plenary sessions, meetings on general themes, meetings on special

problems. The plenary meetings will take place in the morning, introduced by two reports (pro and contra) and followed by discussion. In the afternoon the other series of meetings will take place simultaneously, an hour always being reserved for discussion. For the plenary and general meetings

THE FOLLOWING THEMES

have been proposed:

- (1) The limits of the natural sciences.
- (2) The importance of logical analysis for knowledge.
- (3) Descriptive and normative social science.
- (4) Religion and Philosophy.
- (5) The crisis of Democracy.
- (6) Psychological and pedagogical problems.
- (7) The message of philosophy for our times.

For some of these problems speakers have been selected. We request all who have reports or statements to submit to notify the Committee in advance. Typed manuscripts should be sent not later than *May 15, 1934*. Official languages are: English, French, German, and Italian. Reports on acute problems are preferred, although special problems are also welcome as far as time of the Congress will allow. The reports should not be longer than *15 minutes*, in order to leave time for discussion.

In connection with the Congress

AN EXPOSITION OF PHILOSOPHICAL LITERATURE

published since 1930 is in preparation, arranged by nations. We hope publishers of all nations will exhibit for this purpose.

In view of the general economic crisis the Organizing Committee will give special attention to keeping the expenses of the members of the Congress as low as possible. Especially will it arrange for inexpensive board and lodging.

THE REGISTRATION FEE:

for full members 120 Kč, for extraordinary 70 Kč. The extraordinary members have all the rights of full members except those of receiving the printed Congress report and of taking active part in the discussions. The Czechoslovak Railways promise a reduction in fares to delegates, and the tax thereon is included in Congress fees. Registration fees should be sent to the account of the VIII International Congress of Philosophy at the ZEMSKÁ BANKA in Prague I, Příkopy.

ALL CORRESPONDENCE

should be addressed to: The Organizing Committee of the VIII International Congress of Philosophy, Prague I, Smetanovo nám. 55, Czechoslovakia, or directly to the Chairman.

All information concerning travelling to and staying in Czechoslovakia can be obtained at the Travelbureau ČEDOK, Prague I, Příkopy 13, and its offices abroad.

A second circular with detailed programme and information will be sent out later.

For the Organizing Committee, the Chairman,

Dr. EM. RÁDL,
Professor at the University of Prague.
Prague, IV/279.

Prague, Czechoslovakia,
October, 1933.

Americans who plan to offer papers at the Eighth International Congress of Philosophy should communicate with Professor A. C. Armstrong, Wesleyan University, Middletown, Conn., Honorary Secretary of the Committee.

At the business meeting of the Pacific Division of the American Philosophical Association at the University of California at Los Angeles, December 30, 1933, officers were elected as follows for the coming year: President, James H. Tufts; Vice-President, S. C. Pepper; Secretary-Treasurer, H. G. Townsend; new members of the Executive Committee, J. E. Boodin, E. E. Ericksen.

ERRATUM

Through an unfortunate clerical error in our office, we printed in the preceding issue of this JOURNAL an announcement of an address by Professor Alfred North Whitehead to be given in March at the Institute of Arts and Sciences at Columbia University. This lecture was delivered two years ago.

THE JOURNAL OF PHILOSOPHY

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Volume XXX. No. 23. November 9, 1933.

The Innocence of the Given. DONALD C. WILLIAMS.
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Volume XXX. No. 25. December 7, 1933.

What is Speculative Idealism? JAMES BISSETT PRATT.
Hegel's Attitude on War and Peace. A. C. ARMSTRONG.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 26. December 21, 1933.

The Logic of Measurement. A. CORNELIUS BENJAMIN.
Whitehead's Concept of Process: A Few Critical Remarks.
RALPH B. WINN.
Book Reviews. Journals and New Books. Notes and News. Index
to Volume XXX.

Volume XXXI. No. 1. January 4, 1934.

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24/2/34

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THE JOURNAL OF PHILOSOPHY

ON THE ATTRIBUTES OF MATERIAL THINGS¹

I

THIS paper will attempt to show that qualities and properties are very different sort of entities, and that a neglect of the difference between them is in large measure responsible for the persistence of the controversy between idealism and realism. The term "material things" will be used to refer to such entities as the tables, trees, books, houses, animals, minerals, mountains, rivers, etc., by which we are surrounded in the view of common sense, and the assumption of common sense also will be made, that we can well enough for ordinary purposes identify a place in space by pointing to it. Although the problem of the meaning of the terms "space," "time," and "material thing" is raised by the views to be presented, no attempt to deal with it can be made within the limits of the present paper.²

In philosophical discussions, such simple statements as "This tree is green," "The table in my study is brown," etc., are frequently used as examples of information, obtained by perception, concerning attributes of material things. The present discussion will take as a starting point the statement "This tree is green," and will be throughout largely worded in the terms of this particular statement. While this procedure may at first appear to entail some loss of generality, it will have the great advantage of minimizing ambiguity and the consequent risk of misunderstanding. In the next two main divisions of this paper, two radically different senses, one or the other of which appears sufficient in all cases to interpret the assertion "This tree is green," will be examined. And in the

¹ Read in condensed form at the meeting of the Eastern Division of the American Philosophical Association, Amherst College, December, 1933.

² The writer, however, has elsewhere outlined the sort of analysis of the notion of Material Thing that he would propose to give. The outcome of it is in brief that a material thing is nothing more nor less than a set of properties (in the sense of that term to be stated below) possessed by a region of space between certain times, or, if we prefer, a region of space possessing between certain times a set of properties. See "On Our Knowledge of Existents," *Proceedings of the Seventh International Congress of Philosophy*, pp. 37ff.

fourth main division, the bearing of the distinctions established upon the contentions of realism and idealism will be considered.

II

1. *The Quality Interpretation.*—In the first of these senses the meaning of "This tree is green" would be made explicit by saying "The color we see as we now look at this tree is the color called green." When the given statement is so interpreted, its true, as distinguished from its ostensible, subject is a certain immediately intuited color-quality, and the tree enters into the story only as an adventitious means of indicating which one of the many colors at the moment seen is being talked about. That this is so becomes evident if we note that, instead of mentioning the tree, we could have taken a cardboard tube, pointed it in a certain direction, and said: "The color seen when one looks through this tube is the color called green." In spite of the fact that this statement is verbally different from the other, the very same directly intuited color-quality is obviously indicated by the subject-terms of the two; and it is this color-quality that either of them asserts to be the color called green.

2. *How the Truth of Assertions of this Kind is Tested.*—Doubt as to the truth of the assertion "This tree is green" as interpreted in the manner just described would be resolved by comparing the directly given color-quality with a sample of the color that all parties concerned are agreed to regard as constituting the definition-by-type of the word "green," i.e., as constituting the standard of greenness. Or, putting the matter a little more generally, the truth of assertions of this kind is tested by observing whether the given concrete subject (in this case the particular color intuited when one looks at the tree) does or does not conform to the agreed definition (in this case, definition-by-type) of the predicate asserted of it.

3. *A Parallel But More Plausible Instance.*—The above interpretation of the statement "This tree is green" may seem forced, and the procedure just mentioned for testing the truth of the statement as so interpreted may seem artificial—a procedure, even, never actually used. Such an objection, however, would really have its root only in the fact that the statement used as an example, when taken out of any practical context, is so trivial that no one would be likely to utter it at all, or to dispute it if uttered. But it is easy to give other precisely parallel examples in which both the interpretation and the testing procedure described are obviously the appropriate ones and are the ones actually used in practice.

Such an example, likewise involving color, would be provided by

the colors that have to be observed in the tempering of steel. The novice in that art is told that, to obtain the temper suitable for certain purposes, the steel must be chilled when it exhibits the color "light-straw." But just because his idea of what color is meant by "light-straw" is likely to be vague, he is provided with a standard in the form of a chart of the principal colors that heated steel can take, each with its agreed name. The question "Is this piece of steel light-straw color?" obviously is for the man who would temper it a very real one, and the only meaning that it has for him is whether the color he sees at the moment he looks at the steel is the color called "light-straw." This question he does answer by comparing the color he sees when he looks at the steel with the color he sees when he looks at the place labelled "light straw" on the chart.

4. *Other Examples.*—Examples of assertions which are really of the same kind, but in which the predicate is such that its meaning would be defined otherwise than by type, would be: "What this man is suffering from is typhoid fever," "This animal is a ferret," "This substance is gold," "The relation of these two points is adjacence," "This man is the former King of Spain," etc. The variety of these examples shows that the assertions that are tested in the manner considered may be, but need not be, about a quality. They may equally well be about a relation (adjacence), a stuff (gold), a complex state (typhoid fever), an organism (ferret), an individual (the King), or anything else given by direct or indirect indication.

5. *General Character and Function of the Judgments Leading to Such Statements.*—The judgments as a result of which such statements as have been exemplified are made may all be described as judgments of *identification* or *classification*. That is to say, they represent attempts to determine whether or not some entity directly or indirectly indicated is of some suggested familiar kind, or is some familiar individual. The function of such judgments is to bring to bear upon the particular entity that one indicates knowledge already possessed about the kind to which one refers it, or about the individual with which one perceives it to be identical. That is, epistemically considered, they are *applicative* judgments—their rôle is to provide us with the minor premise for some syllogism of which the major is furnished by our already existing store of knowledge.

III

6. *The Property Interpretation.*—When the statement "This tree is green" is interpreted in the other of the two senses alluded to in the first division of this paper, its ostensible subject, namely, the tree pointed to at the moment, is then its true subject; and what is

asserted of it is that it possesses the *property* of being green. To elucidate further this interpretation of the given statement, it is necessary to analyze in some detail the nature of a property.

7. *Property is an Essentially Causal Concept.*—Examples in which the essentially causal nature of properties is obvious would be fragility, malleability, fusibility, ductility, rigidity, impermeability, etc. No argument is needed to show that any attempt to make explicit what such properties consist in would have to take the form of an account of *what is caused when*. . . . To say that glass is *fragile*, for example, is to say that impact by a hard substance readily causes it to break; to say that gold is *malleable* is to say that hammering causes it to change shape without breaking, etc. Properties such as these two are describable in terms of kinds of effects produced *in the thing that has them* by certain causes under certain circumstances. Some other properties are describable in terms of kinds of effects caused *in another thing* when the thing that has the property is brought into a certain relation to that other thing. For example, sulphuric acid has the property of being *corrosive* of certain other substances under certain conditions; and under analogous qualifications, carborundum, of being *abrasive*; arsenic, of being *poisonous*, etc. But whether they be of one or the other of these two sorts, all the properties that have been mentioned are evidently analyzable in terms of *what is caused when*. . . .

8. *"Primary" and "Secondary" Properties.*—What the present paper is perhaps most fundamentally concerned to establish, however, is that such attributes of material things as "being green," "being fragrant," "being noisy," etc., are properties of them in exactly the same essentially causal sense as are, for instance, "being abrasive," or "being corrosive," etc.: for it seems to the writer that neglect of this fact has been the source of endless difficulties in the theory of knowledge. To render the truth of that contention fully evident, three remarks have to be made:

The first concerns a distinction among properties, i.e., among "effects that are caused in . . . when . . .," on the basis of whether the effect in terms of which a given property is described is a *state of consciousness*—in particular, a sensation—or is a *physical state*. When for instance we speak of carborundum as being *abrasive*, we mean that friction of it against such other physical substances as steel, glass, etc., causes their surfaces to wear away. The effect which is caused when such friction takes place in no way requires for its occurrence the existence of a conscious being; nor does it for its description in any way require inclusion therein of the supposition that such beings exist. Its description can be given in purely physical terms.

But if, on the contrary, a rose is spoken of as being *fragrant*, this means that it is such that under certain conditions its near presence causes in human beings the *state of consciousness* designated as a pleasant olfactory sensation.³ Again, if a person is spoken of as being an *irritating* or an *unpleasant* individual, this means that he is such that in certain relations to other persons, he behaves in ways that cause in them the *feelings* called irritation or discomfort. In such cases, since the effect in terms of which the property is defined consists of a state of consciousness, it obviously can not occur without the actual existence of some conscious being; nor can a description of it be given that does not include the supposition of the existence of such a being.

The same thing would be true of such other properties as "being noisy," "being green," "being bitter," etc. Properties of this sort, viz., those where the effect in terms of which they are defined is a state of consciousness, may be called "secondary" properties; and those where the defining effect is a physical state, "primary" properties. The use of these terms is intended to suggest, not that Locke and others had this in mind when they spoke of primary and secondary qualities, but that the above distinction is the one which their untenable accounts of these terms was really groping for.

9. *Ambiguity of the Terms "Sound," "Color," "Heat," Etc.*—The distinction proposed in the preceding section between properties in which the defining effect is physical and those in which it is psychological might be objected to by persons who would insist on taking such terms as sound, color, heat, etc., in the sense they have in physics. To do this would of course be to grant automatically the point towards the establishment of which that distinction was made, namely, that such a property as "being green" is essentially causal in exactly the same sense as, for instance, "being malleable." For to say that the tree is green would then mean that when struck by a beam of sunlight, it reflects light vibrations of one of the component frequencies, and absorbs the others. But, in the writer's view, this would be granting a right contention for a wrong reason: it would, that is, be granting that "being green" is indeed a causal predicate, but granting it because the word "green" is being taken in the physicist's sense, instead of the ordinary, psychological one, with which we are alone directly concerned in the present connection.

³ The distinction between a sensation and what it is a sensation of—on the basis of which this assertion might be disputed—is analyzed in detail in Section 13. Whether or not the validity of the particular example given above is admitted, the argument in any case requires only the admission that there are some states of consciousness, and that some of them are regularly caused by certain relations of the organism to certain things.

The fact is that the terms "sound," "color," "heat," etc., and the more determinate ones that fall under them, e.g., "green," have two, or rather three distinct meanings—one physical, one physiological, and one psychological. The first and the second of these meanings belong to these terms only in the technical languages of physics and of physiology. The third, on the contrary, namely, the psychological, is the one they had long before these sciences existed, and still have for everybody, including even physicists and physiologists not at the moment engaged in the pursuit of their sciences. Everyone understands the sort of effect meant when quinine is spoken of as being bitter. That effect is a certain psychological state, a certain taste sensation, perfectly known to everybody in the mere occurrence thereof, and knowable in no other way. That what constitutes the meaning which the word "bitter" has for everyone is that kind of a psychological occurrence, and not some physical character or physiological event, is shown by the fact that, so far as the writer has heard, no one as yet knows just what the physical character is that distinguishes "bitter" substances from others, nor just what the physiological events are that distinguish the effect of those substances on the gustatory nerves from the effects of others. But in spite of that universal, or at all events nearly universal, ignorance, the meaning of the word "bitter" is universally known.

The fact is that the original and usual meaning of the word, and of such words as sound, color, heat, etc., is the psychological one; and that much later these terms came to be borrowed by specialists to designate physical facts of the same sort as those which cause in conscious beings the normal sensations of sound, color, etc., or to designate physiological events on which depends the occurrence of those sensations. And to admit this hardly deniable fact is at the same time to admit the legitimacy of the distinction on the basis proposed above, between primary and secondary properties.

5. *Latency and Patency of the Properties of Material Things.*—We come now to the second of the three remarks needed to make evident the fact that the property "being green" is, like any other, essentially causal, that is to say, is analyzable in terms of a certain effect (viz., the sensation of green) which the material things said to possess that property have the power of causing in the consciousness of sentient beings.

What must now be remarked is that ordinarily the things that possess color are presented to our attention visually, i.e., through the effect they produce at the time in our color-consciousness. For example, when we say "This tree is green," the chances are that by "this tree" we mean "the tree we are looking at," rather than "the tree we are touching in the dark"; although we might, of

course, well be meaning the latter. But if we were, the assertion that *that* tree is green would lose its triviality, because it would in this case no longer be an assertion of something at the time obvious. And in this case also, the account of the meaning of "being green" that describes it as possession by the tree of a power or property, that, namely, of causing in us (under other conditions) the sensation of green, would lose the artificiality it seems to have when the conditions existing at the moment happen to be those under which that power is no longer latent but patent, i.e., is being exercised upon us by the tree.

That feeling of artificiality thus arises only from the unusualness (notwithstanding the correctness) of asserting of an effect which is *actually* being produced, that it is susceptible of being produced (namely, is produced whenever the circumstances are of such and such another nature). It would feel similarly artificial to speak of mercury as fusible or of granite as solidifiable, and for the same reason, namely, that under the conditions ordinarily present when these substances are observed, they are not merely potentially but actually liquid and solid respectively. A property is a power that a thing has to produce certain effects; but which particular one among the various powers which it possesses it happens to exercise at the moment depends on the particular set of conditions that happens to be present at that moment. We speak of the powers of a thing mostly at times when they are not being exercised by it; for there is seldom any occasion for us to utter concerning a thing the truism that it *can do* that which at the moment it is actually observed to be doing.⁴

It may be observed at this point that, after the causal analysis of properties that has been given, there is no longer any paradox in saying that a tree, which at the moment happens to be in the dark, nevertheless is green. For it only means that that tree, which under the existing circumstances causes in the observer only tactual sensations, or possibly visual sensations only in the range of grays, is nevertheless such that, under certain other well-understood circumstances, it would cause in him the sensation of green.

⁴ Readers under the influence of Hume's views on causation may balk at the use of the term "powers." Space will not permit here an attempt to vindicate it. The writer can only refer such readers to the criticism he has published elsewhere of Hume's doctrine of causation, and to the theory of that relation which he has proposed, in which the notion of "power" is analyzed in terms more fully empirical than were Hume's own, when he supposedly exploded that notion. See *Causation and the Types of Necessity*, Univ. of Washington Press, 1924 (p. 87 for the analysis of "power" which term is there, however, taken in a somewhat narrower sense than here); also "On the Nature and the Observability of the Causal Relation," this JOURNAL, Vol. XXIII (1926), pp. 57-68. *Contemporary American Philosophy*, 1930, Vol. I, p. 321.

10. *The Real vs. the Apparent Color of Things.*—The third of the remarks needed to vindicate our causal analysis of the property “being green” concerns the fact that although maple trees, for instance, when seen a long distance away sometimes produce in us the sensation of blue, we nevertheless say that they are *really* green and only *appear* blue. This is a firm belief on our part and it can not be lightly dismissed; there is undoubtedly a sense in which it is true, and our task is to define that sense and to show that it is consistent with the causal analysis proposed.

The fact need hardly be insisted upon that the production by the maples of the sensation of green in us is just as dependent on the nearness of the maples, the clearness of the intervening air, the sort of light that falls upon them, etc., as their production of the sensation of blue is dependent on their remoteness, the haziness of the intervening air, and other conditions. It is therefore obvious that the distinction between their real and their apparent color can not be that the latter is the color they cause us to see under certain conditions and the former that which they cause us to see apart from any conditions. The color we see *always* depends, not only on the thing looked at, but also on the conditions under which it is being observed. Painters, who have to attend to the colors that things actually make them see, are well aware that it is only under certain conditions that the color they see when looking at flesh is “flesh color,” when looking at gold, yellow, etc.

Reflection on these facts leads us to perceive that the true distinction between the “real” and the “apparent” color of a thing is one between the color it causes us to see under what we consider *standard* conditions, and the colors it causes us to see under what we consider *accidental* or *abnormal* conditions. The question is then on what basis we come to consider certain conditions as standard, and others as abnormal.

That basis seems to be essentially practical; that is, the conditions we come to regard as standard or normal seem to be largely those under which we are observing the thing when we are using or are about to use it, or are to it in such other practical relation as it generally has to our lives, conditions, for instance, under which other important characters of the thing (e.g., the species to which a tree belongs) are discernible. Another factor, likewise practical, which also seems to enter into the determination of the conditions regarded as standard, is that of relative ease of duplication, which is important if our judgments are to be readily accessible to verification by others. This factor, for instance, would seem to be a governing one when we judge that the top of a table is “really” square and only “appears” trapezoidal. The angle of observation defined by a line

perpendicular to the center of the table surface is simpler to specify and to refer to than any other would be, and the "real" shape of the table is therefore conceived in terms of it even though a table-top which causes us to perceive a square when observed from that angle does just as truly cause us to perceive a trapezium when observed from another angle.⁵ It may be remarked incidentally that the distinction between the "real" and the "apparent" characters of a thing tends to disappear in many cases, when we pass from the ordinary practical to the scientific level of description, and this because science always attempts to include in the statement of its findings an explicit account of the conditions under which they were obtained, and to which they are strictly relative. And just because the distinction in question has its significance primarily at the practical common sense level of knowledge, which, it should be noted, is the level truly relevant to most of the ordinary situations in our lives, but which is inferior in explicitness and precision to the scientific, because of this, the set of conditions used as standard in judging, for instance, the "real" color of a thing is difficult to specify with complete definiteness.

Bearing in mind the nature of the distinction we have now discerned between the real and the apparent color of things, it becomes evident that, instead of attending to the apparent color as a painter would, what we generally do is to treat it only as a clue to the real color. For instance, we judge the beard of an old man to be gray, in spite of the fact that the color it actually causes us to see under the conditions existing at the moment is perhaps a light green. When we so judge we are using the light-green actually seen only as a sign that we would see not green but gray if we looked at the beard under the conditions (of illumination, distance, absence of reflection from surrounding objects, absence of contrast effects, shadows, high lights, etc.) that constitute the standard in terms of which we define the "real" (or what artists sometimes call the "local") color of the beard.

11. *Import and Function of Judgments of Properties.*—The considerations set forth in the preceding sections enable us now to state explicitly the meaning of the assertion "This tree is green" when interpreted as expressing a judgment of property. It means, namely, that the tree, whether or not it be at the moment looked at, is such that under the conditions of observation that are the standard ones for such an object, it would cause a sentient observer of it to see

⁵ Determination of the "real" shape of the table by means of yardstick and protractor presupposes that we have already ascertained, in the sort of way just indicated, that the changes of size and shape of those instruments themselves, which we see when we move them about in using them, are only "apparent" changes.

the color green; and hence, that, if at the moment those standard conditions happen to be present and the tree looked at, it then is causing the observer to see the color "green."

It is obvious that when the problem to be solved is whether the tree considered has the *property* of being green in the sense just described, the question whether the color *quality* seen at the moment one looks at it is the one called green is not at issue, for the answer to it is assumed to be self-evident. The problem in such a case, that is to say, is one to be solved not by a comparison of given colors, but by arranging the standard conditions and noting whether or not this causes in our consciousness the occurrence of the sensation of green.

The task that leads us to inquire into the *properties* of things is not as before that of applying knowledge we already possess concerning a kind to something indicated, which we identify as a case of that kind. The task that leads to such inquiry is on the contrary that of amplifying our store of applicable knowledge; and the function of our judgments in such cases may therefore be termed *amplificative* (of knowledge), as contrasted with the *applicative* function of the judgments first considered.

IV

12. *Some Implications of the Position of Some Realists.*—Neglect of the various considerations to which attention has been drawn above seems to be chiefly responsible for a certain unfortunate philosophical supposition, namely, that the green color, for instance, which is seen when one looks at a tree may exist on the tree when no one looks at it, or perhaps even when the tree is in the dark.⁶ This supposition bases itself upon a distinction between that which is seen, e.g., the color-quality "green," and the seeing of it.

That there is something radically wrong with such a doctrine becomes evident when its implications are traced out in detail in realms of sensation other than the treacherously favorite one of sight. For the same doctrine, when applied in a strictly parallel manner, for instance in the realm of hearing, requires us to say that the very noise-quality which we hear when we listen to a bell struck by a hammer may without contradiction be supposed to be itself literally present in the bell when no one hears it, or perhaps

⁶ Some realists would not assert the latter, but if not they would be depriving themselves of the possibility of giving to the common-sense belief that a green tree is green even in the dark any meaning in which it would be true. Also, some realists would say that when the tree is not looked at, the green color (of it?) nevertheless exists, but not on the tree or not at the place where the tree is. The implications of such a position, however, are of no more acceptable a character than those, about to be exhibited, of the philosophical supposition mentioned above.

even when it is not being struck, just as it was declared that the very color-quality which we see when we look at a tree struck by a beam of light could without contradiction be supposed to be itself literally present in the tree when no one sees it, or perhaps, even when it is not being illuminated.

Again, carrying the doctrine in a precisely parallel manner to another neglected realm of sensations, viz., the kinæsthetic, we find ourselves required to say that the quality called nausea, of which we obtain experience when we bring the substance ipecac in the appropriate relation to the relevant inner sense organs,—that that very nausea-quality may without contradiction be supposed to be literally present in the ipecac when it is still in the druggist's bottle. Indeed remorseless consistency would require us to go even farther, and to declare legitimate the supposition that that very nausea-quality is intrinsically present also in the waves of the sea, even when the semi-circular canals of some person subject to seasickness are not in the spatial relation to those waves necessary to procure him the experience of the nausea-quality.⁷

It is difficult to believe that anyone should continue to consider the doctrine in question plausible after he has clearly perceived such implications of it as have just been exhibited. Rather, these implications move one to inquire what subtle confusion it can be that gave the doctrine its initial plausibility.

13. *Ambiguity to "to See," "to Hear," "to Smell," Etc.*—A little reflection discovers that confusion to be one which arises from neglect of the fact that such verbs as "to hear" and "to see" are ambiguous, and that they are used in radically different senses when one says "I hear a bell," or "I see a tree," and when one says "I hear sound" or "I see color." The assertion "I see a tree" means, in the light of the analysis given earlier in this paper, that I am at the moment having some sensations of color and shape which I accept both as effects, and as signs, of the existence at a certain place in space of what is meant by "a tree." But "a tree" means much more than something having the property of causing in one the sensations of color and shape that I have at the moment; it means, for instance, something having also the property of hardness, viz., of causing in one, under other circumstances, certain tactual sensations. It is therefore obvious that, since hardness is observed not

⁷ It should be noted that it is not "nauseousness" but the nausea-quality itself, that the doctrine would, if consistently carried through, assert to be possibly present in the ipecac and the waves; for nauseousness is not a quality, but a property of some material things, viz., that of, under certain conditions, causing sentient beings to have an experience of the nausea-quality. Nauseousness therefore could without absurdity be said to be a character of the ipecac and the waves; whereas the nausea-quality could not.

through sight but through touch, one can speak only elliptically of seeing a tree or any other material thing. "Seeing" as so used is an ellipsis for judging, on the basis of visual signs, that a material thing having also such and such other⁶ than visual properties exists at a certain place.

But when one says "I see color," the meaning of the verb "to see" is very different. It no longer means interpreting certain visual sensations as signs of the existence of a material thing, for no material thing is now in question, and no interpretation occurs. What is now seen is color, and it is seen, not, as material things always are, in an elliptical sense, but in the most literal sense, viz., that of being intuited. What is intuited is simply determinate color, and not, as the tendency to reify even colors would tempt us to say, the color of a color. The fact is that there are certain entities called feelings, sensations, simple qualities, immediate experiences or apprehensions, the whole being of which is known in introspection and is exclusively psychological, whatever may happen to be their necessary physical and physiological antecedents or concomitants. And if one leaves such physical and physiological conditions out of the story, and confines oneself to facts accessible at the time to the person who is seeing color, viz., to psychological facts, then, to say for instance, "I have a feeling of nausea, or of pain," or "I have a sensation of green," means nothing whatever other than "My feeling at this moment is of the sort called nausea, or pain," or "My sensation at this moment is of the sort called green."

What is experienced, sensed, felt, or seen, in the literal as distinguished from the elliptical sense of these words is only logically, but not existentially, separable from the experiencing, sensing, feeling, or seeing of it. When, as now, that literal sense alone is in question, then, notwithstanding the treacherous little word "of," there is between experiencing and what the experiencing is of, between sensation and what is sensed, feeling and what is felt, seeing and what is seen, no other difference than that between, for instance, waltzing and what is waltzed.⁸ That sense does permit us to use the word "of" in similar fashion, and speak of the waltzing of a waltz, or to say that what is danced on a certain occasion is a waltz. But it obviously does not warrant the supposition that a waltz may exist when no waltzing is taking place; indeed, the discerning of that sense renders manifest the absurdity of such a supposition, and likewise of the supposition that color, nausea, etc.,

⁸ Lest the ambiguity of the word "waltz" should lead us into confusion, let us agree to take that word only in the sense in which it means a certain sort of series of movements, and not in the sense in which it means the sort of music that usually is heard while these movements are performed.

may exist when no seeing, feeling, etc. (in the literal sense) is taking place.

But when the terms "experiencing," "feeling," "sensing," "seeing," etc., are used in the elliptical sense described above, the situation is very different. The relation between the (elliptical) seeing of the tree, and the tree (elliptically) seen is not (except grammatically) in the least like the relation between the dancing of a waltz, and the waltz danced, nor therefore like the precisely similar relation between the (literal) seeing of color and the color (literally) seen, or between the smelling of odor and the odor smelled. For the relation between the seeing of the tree and the tree seen has been shown by our earlier analysis to be a causal relation, the tree being the cause, or more accurately the agent that causes, the seeing, and the seeing is the effect, and therefore potentially the sign, of the existence at a certain place in space of a tree.

The relation, on the other hand, between the (literal) seeing of color and the color (literally) seen is not at all causal. For if we ask what is the cause of our seeing color, the answer is in terms of the presence outside the body, not of color, but of some material thing, and of the absorption and reflection by the surface of that material thing of certain vibratory frequencies of the form of energy called light; and further, in terms of certain physiological conditions within the body. Such physical and physiological facts are known to be the cause of our seeing color; and to say that the cause of our seeing color as a color would therefore be simply to say something false, and would be possible only if one were ignorant of the facts, or if, blinded by an indiscriminating devotion to realism, one were to insist on making of color a substance. But realism is in no need of having such logical monstrosities laid upon its altar.

Just what, then, is the relation between the seeing of color, and the color seen? or the relation between the waltzing of a waltz, and the waltz waltzed? Let us approach this question in terms of the latter example, since in it less strain is placed by preëxisting philosophical devotions upon our logical conscience.

Two distinct facts can be noted concerning the individual set of our movements on an occasion when we are said to be waltzing. One of these facts is that that set is very similar to certain sets of our movements at other times. By attending to the likenesses and neglecting the differences between these various individual sets of movements, we are able to form a certain concept of kind, namely, that represented by the word "waltz." And when we predicate "being a waltz" of any actual or supposititious set of movements, we are then only saying of what nature, or kind, it is.

The other fact to be noted is that our individual set of movements on the occasion considered also belongs to a certain group, the members of which, however, are most heterogeneous as regards their intrinsic characters, namely, the group consisting of all and none but such entities as possess a unique place in time. This basis of grouping, or respect of likeness, we refer to by calling the members of the group "events," or "occurrences"; such terms predicating nothing whatever as to the individual nature of the members but only the bare fact that they have some unique place in time.

When, however, we wish to refer to our set of movements *both* as occupying some unique place in time, *and* as having a certain nature, i.e., being of a certain kind, then, as a matter of linguistic usage, we do this not as we might by saying that it is a "waltz occurrence," but by using the word "waltz" in one of its verb forms, e.g., waltzing, being waltzed, having been waltzed, etc.

That we are thus able to distinguish conceptually the fact of occurrence from the nature of the occurrence is what permits us to speak of dancing a waltz, although to speak in this way is redundant since merely "waltzing" would have said just as much. But this possibility of distinguishing the fact of occurrence from the nature of the occurrence in no way permits us to suppose that a waltz might exist apart from any waltzing, i.e., apart from occurrence of any case of the kind "waltz." The only sort of existence, if we wish to call it that, that a waltz has apart from occurrence of it, i.e., apart from being waltzed, is logical existence, and this sort of existence is never in doubt about anything, for anything whatever that we might mention possesses it in virtue merely of its being mentionable. Even contradictions, such as "round squares," possess logical existence, for to say this is only to say that the words have meaning, i.e., that when we say that round squares do not occur, we understand what it is that there are none of.

Let us now return to the question of the relation between smelling, or seeing, (in the literal sense) and the smell that is smelled, or the color that is seen. In the light of the distinction we have discerned between the fact of occurrence and the nature of what occurs, we are now able to perceive that "smell," or "color," or more generally, "sense quality," are the names by which we indicate merely the "what," i.e., the class or kind, that constitutes certain logical entities about which we desire to speak; whereas "smelling," "seeing," or more generally "sensing," or "feeling," are the names by which we indicate *both* the fact of occurrence *and* the kind or nature of what occurs. This distinction, as in the other example, permits us to speak (although again redundantly) of the smelling of a smell, the seeing of a color, the sensing of a sensation,

or the feeling of a feeling; but it does not permit us to suppose that *what* is smelled, or seen, or sensed, or felt (in the literal sense), could exist (otherwise than merely logically) apart from any smelling, seeing, sensing, or feeling, since these are but the respective names for the *occurrence* of smell, color, sensation, and feeling.

All this means in brief that the relation between smell and smelling, color and seeing, sensation and sensing, is simply the relation between *kind* and *case*; and the relation between sensation and color or smell or taste, etc., or between sensation and green or blue or pink, etc., is that of kind to narrower kind, i.e., genus to species. Obviously, when the terms "seeing," etc., are used in the elliptical sense, we can similarly distinguish between the "what," i.e., the nature or kind of the material thing (elliptically) seen, and the occurrence of a case of that kind. But "occurrence of a case of that kind," and "seeing (elliptically) a case of that kind," are not here at all synonymous expressions, as on the contrary they were when literal seeing was in question. The difference is made obvious by the fact that the judgment "I see green" (in which "see" has the literal sense) can not possibly be erroneous if I understand correctly the meaning of the word "green"; whereas the judgment "I see a tree" (in which "see" has the elliptical sense) may very well be erroneous even if I know perfectly well the meaning of the word "tree." This is because the second judgment has an objective reference, i.e., the occurrence of a case of a material thing, e.g., of the kind "tree," does not consist in the seeing (elliptical) of a tree; whereas the first judgment had no objective reference, i.e., the occurrence of a case of the kind "green" does consist in the seeing, even if only in a dream, of green.

We may put the matter still more explicitly by saying that, when literal seeing is in question, *only* the relation of kind to case is involved, and it obtains between what is literally seen or smelled, viz., color or odor, and the seeing or smelling of it; whereas when elliptical seeing (or smelling, etc.) is in question, *two* relations are involved. One of them obtains between the material thing elliptically seen, and the seeing of it, but it is the relation of *cause* to *effect* (and hence of signified to sign), and not that of kind to case. The other relation involved is indeed that of kind to case, but it obtains between the *kind* of material thing (of which a case is elliptically seen) and the *case* of that kind (which is elliptically seen) and not between what is seen and the seeing of it.

14. *Conclusion.* We are now in position to perceive that in including qualities as well as material things under the vague, question-begging heading of "things" and treating as definitive of all "things" the independence of observation which is true only of

material things, Professor Perry⁹ is himself guilty of the fallacy that he calls that of "definition by initial predication," with which he justly taxes Berkeley when the latter does the exact opposite, viz., extends to material things the dependence on observation which is true only of qualities, through the initial inclusion of everything under the vague, question-begging term "ideas."

More generally, we can say that, where sense qualities are concerned, Berkeley is right; and all realists are wrong who claim it possible that such qualities should, independently of their being sensed (or imagined), have any existence at all (other than purely logical). On the other hand, where material things are concerned, the realists are right in asserting that they exist independently of their being perceived. And Berkeley is wrong in denying this, because a material thing can not correctly be defined as a complex of sensations; nor even sufficiently as a permanent possibility of sensations; but only as a complex of *properties* (in some of which the defining effects are not sensations at all) possessed by a region of space during a time.

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APPEARANCE AND ORIENTATION¹

DESPITE the divergencies in contemporary epistemological theory there is one point that is rarely questioned. This is the assumption that something, or somewhat, is immediately given in cognition. If it is not the object itself, as all but the neo-realists agree, then it must be a matter, or datum of some sort which is given. If cognition can not itself be immediate, for reasons with which the dualists have made us familiar, then it must be mediate, i.e., must involve a process of mediation. But how can mediation occur and knowing take place unless there be something immediate to be mediated? The conclusion seems inescapable—as it is, provided the alternatives are exhaustive. But may it not be possible to analyze cognition in other terms, and to deny that knowledge is immediate without being committed to the doctrine that it consists in a process of mediation? A possible theoretical alternative is suggested by perspectivism, although it has not, so far as I am aware, been formulated by the advocates of perspectivism themselves.

According to this doctrine, the percipient—and in an extended sense, the knower—apprehends things from a particular standpoint.

⁹ *Present Philosophical Tendencies*, p. 128.

¹ Read at the meeting of the Eastern Division of the American Philosophical Association, Amherst College, December, 1933.

This means that what he knows is not things in themselves, but aspects of things as determined by the perspective in which they stand with reference to the percipient. This is admittedly a relativism, but inasmuch as perspectivity is itself objective, and since a character ascribable to an object in a given perspective really belongs to it in that perspective, the relativism is held to be objective. Now there is a certain ambiguity in this doctrine which is the cause of considerable confusion of thought. What the perspectivist should assert is that perception does not consist in the presentation of an appearance, but in the apprehension of an object *from* a standpoint. What he often seems to hold, however, is that aspects are somehow given in perception as bare appearances, and the problem with which he is concerned seems to be the construction of the object from these appearances. In short, he seems to treat the standpoint of the percipient as a merely external fact, a circumstance to be noted by the outside observer, and not as a factor internal to perception itself. Yet it is surely evident that it is meaningless to talk of the apprehension of an aspect unless it be from a standpoint. It is only the reference to standpoint which can make possible the objectivity of what is perceived. The apprehension of what is relative can be objective only if it be apprehended *as* relative, and not as simply given.

The theoretical implications of perspectivism are then, I think, more radical and more far-reaching than has usually been recognized. Standpoint, or orientation, is not merely a fact about perception; it is a factor internal to perception. From this it follows: first, that whatever is apprehended is apprehended *from* a standpoint; there is no bare given as such; a datum is not immediately presented and then referred or synthesized. Secondly: while the percipient perceives from a standpoint, he does not perceive his standpoint. To borrow the terminology of Hobhouse, standpoint is "in consciousness" but not "for consciousness." The distinction between content and orientation is thus an ultimate one for epistemology; orientation is a factor in perception which is irreducible to content.

Let us consider the specific case of the visual perception of shape.

According to traditional theory, an object placed below or at one side of us, as, for example, the familiar penny lying on the table, presents an apparent shape which is other than its real shape. The penny appears elliptical, although it is perceived as it really is, as round. Our perception of its roundness is supposed to be in some way mediated by the immediate apprehension of its apparent shape. The ellipse is given in some sense in which the circle is not. If one asks just how and in what sense it is given, however, the answer is

not simple. We see the penny quite unquestioningly as round; we must make a distinct effort to catch the apparent ellipse. Seeing appearances is an art we acquire in childhood when we learn to draw. Yet common sense, as well as traditional theory, regards the apparent ellipse we catch by an effort as somehow there, in a sense in which the real circle is not. An adequate epistemological theory must account for this natural belief as well as for the psychological phenomenon.

A real shape differs from an apparent shape, let us assume, precisely in the fact that it presents a determinate set of appearances. A circle, for example, might be defined as that figure which presents a determinate series of apparent ellipses as its position relative to the observer is changed in a determinate manner. To perceive the penny as round as its position is varied must mean then, not merely that a particular ellipse is given, but that it is apprehended as a member of the circle-series. If the ellipse is given as matter, it must be synthesized by the imagination in accordance with the formal law. But this account will not do. It presupposes that the circle presents the appearance of an ellipse. But an ellipse can no more be identified with a given appearance than can a circle. An ellipse, too, is a figure that presents a determinate series of appearances—other ellipses—in a determinate series of positions. Thus we seem committed to an endless regress in which the merely given appearance constantly recedes. On the other hand, if we succeeded in overtaking the given as such, it would be a mere phantom. An appearance which is not an appearance of *something* is nothing at all.

And yet there is some meaning in the statement that the round penny appears elliptical. The fact that we can and do make the distinction between real and apparent shape demands explanation.

The statement that the penny on the table appears elliptical is in truth a condensed statement. We should say that it appears as an elliptical penny would appear if it were straight in front and in a plane perpendicular to the line of vision. We omit the reference to position because the position in question (which will be termed the *O*-position) is a peculiarly privileged one. It is so privileged, indeed, that we tend to identify the appearance of the round penny in this position with its real shape, and to say that a circle seen thus is seen as it really is. Now there are, of course, psychological reasons for this; we see more clearly what is straight in front, for one thing, and for another, the pose of the body is one of organic equilibrium, a most favorable orientation. Moreover, we never "catch" from this standpoint an apparent shape, as we are able to do from other standpoints. But this psychological state of affairs does not justify

the epistemologist in identifying the real circle with its appearance from this privileged standpoint, and thus ignoring the reference to standpoint altogether.

What happens when, by an effort, we catch from other standpoints the apparent ellipse, is that our normal orientation is shifted and partly suppressed, so that we see the penny *as if* straight front. The apparent shape is due to its reference to the *O*-position. Yet this reference can not be complete or unequivocal, since we never actually mistake the penny lying below and to one side for an elliptical one at *O*. The ellipse is seen by us as an illusion in that it gives us no sense of reality; when we catch the elliptical shape we seem to have lost sight of the penny, and the shape appears as a mere shape curiously disembodied. Moreover we do not see it as actually straight front, but still vaguely below and to one side, although it is flat and unsubstantial and at no determinate distance away. Now all this may be explained, I think, as due to a change in orientation, and a partial reversion to the privileged *O*-standpoint resulting in an incomplete and distorted localization of the object such that it is implicitly referred to the *O*-position.

That such a reference actually occurs is evident from the fact that the representation of the appearances of things that we draw is intended to be looked at straight front. The ellipse drawn on paper to reproduce the appearance of the circular object must be held straight in front else it too will present an "appearance" representable as a thinner or shorter ellipse than the one originally presented by the circular object. No representation, however faithful and photographically exact, ever literally reproduces what it represents. The identity between the structural pattern of the representation and the pattern of what is represented, which is essential to representation, is exhibited only when the representation is regarded from the proper standpoint, and this is, of course, not itself contained in the representation. We are here concerned with perception and perceptual representation, but it may be suggested that something analogous is true of conceptual representation, or symbolism.

It might seem that all this is too obvious to need pointing out, much less arguing. But it is precisely this necessary reference to standpoint, this irreducible factor of orientation, that theories of presentationism, and in particular the theory of representative ideas, neglect entirely. The representative idea, or image, was originally conceived, of course, after the analogy of the physical representation, like a picture just there before the mind's eye, as it were, where it could be seen for what it was. But ideas are not, after all, it was recognized, like "pictures on a panel," and they came to be

regarded as pure psychical representations. An idea, it was held, is given directly as no object could ever be given; it is no longer conceived as *before* the mind, but *within* the mind, and so completely is it apprehended that its very being is its being perceived. In brief, the very notion that there remains any vestige of externality or objectivity, or that any standpoint of the mind with reference to such an immediate idea is possible, is vigorously repudiated. Nevertheless, because the essential reference of a representation to the standpoint from which it is to be regarded is not recognized, the idea is still confusedly conceived as a representative image.

So far we have argued that orientation is an irreducible factor in all perception and that reference to standpoint is essential to the apprehension of anything as objective. The fact that we can apprehend things only from a standpoint ceases to imply a limitation to mere relativity and subjectivity just in so far as our orientation is adequate and complete, and so far as the reference to it in our apprehension is explicit. In Hegelian terms, reference to standpoint involves transcendence of standpoint. It has, however, been evident that, at least in the case of visual perception, there is one particular standpoint that is privileged; that the distinction between reality and appearance is dependent on this fact, and that furthermore there is a tendency to identify reality with appearance from this standpoint, and thus to ignore the reference to standpoint altogether. Various important questions present themselves: granted that orientation always occurs and that some reference to standpoint is involved in all cognition, in what sense may this reference be more or less explicit? Again, is the existence of a privileged standpoint peculiar to visual perception, or is it characteristic not only of all perception, but of all cognition, and is the tendency to ignore it in reflective thought and to identify reality with appearance from a privileged standpoint a permanent source of confusion? These questions I shall not attempt to answer here. There is, however, one further consequence of the recognition of orientation, to which attention must be called.

It has just been stated that reference to standpoint is a condition of objectivity. But it is also true that if we necessarily apprehend things in reference to a standpoint, there must be a certain indetermination in our knowledge of them. Objects which are different from one another are indistinguishable with relation to a given referent. Differing figures yield identical projections. However complete our orientation, and however explicit the reference to standpoint, it would still remain true that things really different must appear alike. The penny in the privileged *O*-position, for

example, is indistinguishable from the end of a long cylindrical copper bar. Shall it then be said that we see only appearance and never reality? No; for appearance must be the appearance of something, else it is nothing at all. Although we can not be sure that what we see straight front is really a penny, or the end of a bar, or even a shaved-off slice of a penny, we actually do—in most cases—see it as a penny and we must see it as an object. We do not and can not see a mere surface which is not the surface of a solid. Our perception then is liable to error, but it is not and can not be the indubitable apprehension of a mere given.

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BOOK REVIEWS

The Horizons of Thought. GEORGE PERRIGO CONGER. Princeton: The University Press. 1933. xii + 367 pp. \$5.00.

This book is clearly not intended for the general reader. Like its predecessor, *A World of Epitomizations*, it is a marvel of industrious note-taking and methodical system-building. Its main thesis is stated to be that "our thinking proceeds by selection and at the same time a correlative neglect," the horizons of our thought have always a beyond, the spotlight leaves a background unilluminated. Chapter VI is a good place for the student to begin, for there the author explains his terminology best. He explains that out beyond what our thoughts *denote* there is always a transcendent or "enotative" something; in the background of the characters we *connote* there is a richness undistinguished or "innotative." The author applies this thought of backgrounds to widely diverse realms: perception, logic, mathematics, ontology, the physical world, freedom, value. He does so in a manner that is as elaborately systematic as a medieval Summa.

The present reviewer can evaluate the book only in the sense of giving his personal reaction. He would not deter others from a possibly profitable study of it, but he himself got from it practically nothing at all. He turned rather eagerly to the chapters on mathematical limits, continuity, and infinity, and read them with some care. The text makes few explanatory concessions to the beginning student, and must therefore be intended for the at least partly expert reader. The author quotes from a rather well selected group of previous writers, quotes accurately enough, and then often says something which leaves the instructed reader with an uncomfortable feeling that the author does not quite understand what he has just been quoting. The theory of the transfinite numbers, ordinal and cardinal, does lie, at best, on the utmost horizon's verge

of our finite thinking, though indeed all number theory has its psychological difficulty. We do not need the author's chapters to realize this. There is an only too glaring paradox in the notions of the totality of an endless series, or of a limit lying out beyond the end of such an endless series, and hence also in the notion that the infinitesimal calculus is an exact, and not merely approximate procedure. But the alternative to accepting such paradoxes should give one pause. It means that old Zeno's paradoxes of the finite still hold, and the experienced world is unthinkable. Our author wants to preserve an agnosticism which will not slip into skepticism; but he avoids skepticism, here as elsewhere, by merely not thinking out the implications of what he is saying. What he says is the most obvious thing to say. It is in what he leaves unsaid that the real problems are found, in a region out beyond the horizons of the author's thought.

H. T. C.

Les Sources et les Courants de la Philosophie Contemporaine en France. J. BENRUBI. Paris: Félix Alcan. 1933. 2 vols. 1058 pp. 100 francs.

These two imposing volumes contain a history of French philosophy from Comte, Renouvier, and Maine de Biran to the present. It thus divides French thought into three main currents, empirical and "scientistic" positivism, critical and epistemological idealism, metaphysical and spiritualistic positivism, each of which currents is naturally further subdivided. It is thus a highly schematic treatment of the history of philosophy, a treatment which always risks forcing thinkers into preconceived patterns and neglects everything but the intellectual motives in the reorientation of thought. Furthermore since the author devotes a section to each of 161 thinkers, it is easy to see that he is forced into a kind of over-simplification not always very enlightening. At the same time M. Benrubi has provided us with an extraordinarily complete *Who's Who* of modern French philosophy which contains every name that this reviewer can recall who might be said to have had a philosophy, with the astonishing exceptions of Anatole France and Rémy de Gourmont,¹ and has documented his book with very valuable bibliographical notes. It seems ungenerous to give no higher praise to this unusual feat of industry, but the nature of the task which it fulfills precluded any other.

G. B.

¹ Astonishing, because he does include Barrès, Paul Bourget, and Maurras.

Indian Idealism. SURENDRANATH DASGUPTA. Cambridge: At the University Press. New York: Macmillan Co. 1933. xxiii + 206 pp.

This volume is based on a series of lectures delivered at the Patna University and serves as an excellent introduction to the most important schools of Indian philosophy. It is less technical than the author's larger *History* and more unified. His theme is the attempt to define in terms borrowed from the western doctrine that reality is spiritual (or, more negatively, that the phenomenal world is illusory), the chief types of Indian speculation maintaining this central doctrine. After tracing the growth of the conception of Brahman in eight of the principal Upanishads from the crude ideas of the Vedas to the doctrine of pure consciousness, Professor Dasgupta contrasts this Upanishadic idealism with the more critical and nihilistic development of the Buddhist schools, particularly those of Nāgārjuna, Aśvaghoṣa, and the Laṅkāvatāra. Then he analyzes Śāṅkara's system and the Vedānta schools, showing their indebtedness to both the Upanishadic and the Buddhist types of idealism. The comparison of the Upanishads with Hegel and Spinoza, and of early Buddhism with Bradley is suggestive. This is an exceptionally useful volume for western students.

H. W. S.

The Principles of Logic. C. A. MACE. New York: Longmans, Green and Co. 1933. xiv + 388 pp. \$4.50.

Mr. Mace has written an excellent introductory survey of the more or less settled as well as unsettled problems of logic. While it is considerably shorter than Miss Stebbing's book, and thus does not touch upon many of the important themes she does, on the whole the range of topics treated, the maturity of the discussion, and the general point of view is similar to hers. It leans heavily on Johnson, especially in the chapters on induction; and Mr. Mace has performed a valuable service in bringing together, briefly, systematically, and often with important additions of his own, the contemporary English efforts to improve on Mill. He accepts without criticism, or discussion of possible alternatives, Keynes' theory of probability; and he adapts Broad's classification of types of induction and division of the issues involved, each of which is discussed fully with a view to exhibiting clearly the logical foundations of scientific procedure. Less clear is Mr. Mace's theory of propositions as objective factors in judgment; and the insertion of some dubious psychology in the first few chapters is unfortunate. Strangely enough, the "tautology theory" of logical propositions is not discussed; but "atomic propositions" are not absent, and hang like

the sword of Damocles over many a chapter. An unusual feature of the book is a good sketch of Yule's theory of attributes in connection with the application of the logic of classes to statistics.

E. N.

Science and Sanity. ALFRED KORZBSKI. Lancaster, Pa.: The International Non-Aristotelian Library Publishing Co. Distributors: The Science Press Printing Co. 1933. xx + 798 pp \$7.00. (From distributors: \$5.50.)

This is the first volume in a projected series in a new "Non-Aristotelian Library," whose general editor is the author of the book under notice. It claims to lay bare for the first time an adequate theory of meaning, and so guarantee mankind its proper heritage of sanity in thought and action in every sphere.

A dozen years ago, in his *Manhood of Humanity*, Mr. Korzybski offered a cure for mortal ills in his formula of man as a "time-binder." The world not heeding, but getting deeper into the mire, in the present work he makes a more extended analysis of its troubles. His thesis seems to consist of three major insights: (1) A non-Aristotelian system of thought must be constructed, because the principles of identity must be denied. By this denial he understands that no two concrete individuals can be identified (e.g., p. 405). In addition, the principle of excluded middle, as well as other Aristotelian principles, must be rejected (p. 93). (2) Words are not the things they represent—individuals are on an "unspeakable" level. Knowledge can be only of structure, and hence the structure of language must be "similar" to the structure of the world. (3) Words have "multi-ordinal" meanings, because there are various levels of abstraction. Hence utter confusion results if these are confounded, and if we are not conscious of the mechanism of abstracting. We must take a "neurological" attitude toward meanings, and since mathematics is the only language whose structure is similar to both the world and our nervous system, the study of mathematics is a necessary propedeutic to sanity. On the other hand, if we cultivate proper "semantic reactions" as indicated in the present book, we can avoid wars, revolutions, criminality, prostitution, and low professional standards among lawyers, teachers, and scientists.

These aperçus are supported by voluminous, but on the whole irrelevant, citations from mathematics, physics, colloidal chemistry, biology, psychiatry, and educational practise. But the following may be pointed out: (1) No one has affirmed the principle of identity in the sense that Mr. Korzybski denies it. On the other hand, identity of *structure* is constantly required by him (e.g., p. 434),

although he skirts the issue by postulating only "similarity" of structures, and at the same time considering them as only conceptual (e.g., p. 166). Moreover, he is completely mistaken concerning the bearing of the multi-valued logics of Lukasiewicz upon the principle of excluded middle. (2) That knowledge is not to be identified with its subject-matter, has been known at least since Aristotle, although frequently forgotten. But no revolutionary social or scientific consequences follow from this. On the other hand, the nature of the "similarity" between the structure of language and the world is nowhere carefully discussed. Nor does Mr. Korzybski seem to be aware of the painstaking treatment this question has received in recent years. (3) His third insight is the most interesting one, although here too he seems unaware of its great antiquity. However, except for his stimulating discussion of the mathematical infinite (p. 206) and his hints on the nature of theory (p. 253), he contributes nothing to the clarification of meanings by definite analyses of special problems. Indeed, he only adds to the confusion when he declares that hypotheses contrary to the fact are meaningless (e.g., p. 168); if his views were correct, science would come to an end. His theory of meaning, like his theory of social causation, is very naïve, to say the least.

E. N.

We Move in New Directions. H. A. OVERSTREET. New York: W. W. Norton & Company, Inc. 1933. x + 284 pp. \$3.00.

An outgrowth of Professor Overstreet's course at The New School for Social Research in the fall of 1932, this book should help to silence those who complain that teachers of philosophy make no attempts to illuminate contemporary social difficulties. The author has the gift of persuasive popularization, and makes good hortatory use of much current discussion in the fields of economics, education, esthetics, and politics. His "new directions" are only mildly liberal, such as the now-familiar socialization of economics, internationalism, progressive education, functional government, regional planning, and lessened intolerance. Many of his pages are not conspicuous for historical perspective; and at times his point of view is so markedly urban as to call for the familiar reminder that New York is not America. Often it is hard to tell whether he is talking in terms of hopes, ideals, predictions, or sober statements of fact. The book might well be useful as a quick survey of current social trends as seen by an optimistic liberal, or as a provocation to thought on the part of those persons, if any there be, who imagine that they are still living in the world of William Howard Taft.

H. A. L.

A Philosophic Approach to Communism. THEODORE B. H. BRAMMELD. With a Foreword by T. V. Smith. Chicago: University of Chicago Press. 1933. xi + 242 pp.

This book discusses the question: "Is Communism a doctrine which requires its exponent to acquiesce in his own nature or in the course of history; is it a doctrine which permits him to take a primary, active part in shaping that course; or is it somehow both?" It goes almost without saying that the answer is "somehow both." By discussing in turn the communistic conception of the individual, the world, and the relation between individual and world, the author argues (in the manner of a Chicagoan synthesis of the Hegel-Dewey antithesis) that in Communism the *acquiescent* "interchange of the individual and the world" and its antithesis, the *active* "interaction of the individual and the world," are synthesized in its characteristic attitude of "acquiescence-activity."

"Each of the three great levels in history . . . may be deduced as a correlation of individual and world: the primitive level is a unity of individual producers and a truly communal though simple society; the capitalist level is a unity of the anarchy of competitors and the coöperations of vastly systematized industry; the level of a classless society is so perfect a classlessness as to allow unstinting expression of personal autonomy and yet so complete a sociality as to unite the individual within the objective mass" (pp. 125-126).

"What we actually seem to have in Communism is an activity within acquiescence, an attitude expressed in analyses, tentative adjustments, interactions, but also an attitude which reveals itself as accepting certain profound presuppositions and absolute although dynamic criteria. Communism derives its hypotheses, one might say, from extreme polarities, and turns those hypotheses back into equally extreme polarities so that they are actually no longer hypotheses at all. Yet it manages to perform this feat through a technique having virtually all the characteristics of scientific methodology on a wide scale" (p. 206).

Though this analysis is evidently artificial, and though the thesis is a dialectical *tour de force*, this book is nevertheless useful for its many philosophical gleanings from Communist literature, its extensive references, and occasional insights.

H. W. S.

Science in Defence of Liberal Religion: A Study of Henry More's Attempt to Link Seventeenth Century Religion with Science. PAUL RUSSELL ANDERSON. New York: G. P. Putnam's Sons. 1933. 232 pp.

The material of this book is better indicated by its sub-title than its main title. In six chapters Mr. Anderson discusses in turn the

following subjects: the bitter religious strife in what a contemporary writer aptly characterized as a "spiritual infatuated age"; the strain of Platonism in the earlier English Renaissance; Henry More's use of a mystic and other worldly Platonism to express his own religious convictions; More's exuberant incorporation of certain Cartesian ideas into his own philosophy in order to reinforce his belief in the existence of God and the immateriality of the soul; his growing distrust of Cartesianism because of its mechanistic world-view and its consequent exclusion of miracle and spiritualistic phenomena; and the effect of preoccupation with Cartesianism upon More's religious life. The last subject is a novel contribution to the literature about More and is clearly and successfully treated. When More became a critic of contemporary Cartesian science, he necessarily turned from attention to the moral and esthetic qualities of the life of communion with God and became engrossed in working out a religious cosmology that could hold its own against the contemporary scientific cosmology. In Mr. Anderson's words, More turned "from the expressive to the discursive side of religion." Hence "analysis of the nature of God came to be more important than personal communion with God"; or "religion became associated with the realm of perceived facts rather than with the realm of human values" (pp. 192-193).

Mr. Anderson follows the classic volumes of Principal Tulloch in regarding the enterprise of More and the rest of the Cambridge Platonists as directed to finding a "basis for peace" for a church torn by factions. Doubtless the enterprise had ironic aspects, especially in some of the "latitude man." But More was no mere compromiser. He had vigorous religious convictions of his own, and he needed to find some respectable intellectual ground on which to justify his convictions to himself. His Platonism was his badge of respectability. If others joined him in his Platonism, he would of course make this Platonism a basis for peace. But where his Platonism was challenged (as by the Cartesian mechanistic world-view) it was rather the fortress from which to wage a ceaseless battle of violent controversy. Fundamentally, it would seem, the Platonism of the Cambridge School was the means by which certain members of the intellectual class were able to justify to themselves and their contemporaries their loyalty to their ancestral religious faith.

S. P. L.

An Introduction to Philosophy, DAVID R. MAJOR. New York: Doubleday, Doran & Co. 1933. vii + 495 pp. \$2.00.

A conscientious, if somewhat pedestrian, attempt to survey for beginning students of philosophy all the major problems, issues,

and theories with which philosophers are concerned in any phase of their professional activity—from ontology to axiology, from sensations to the Absolute, and from Thales to Professor Spaulding. As an introduction to philosophic thought this method of presentation has obvious and very nearly overwhelming difficulties and there is nothing in this routine exposition which has not been better done in standard texts on the subject.

A. E. M.

JOURNALS AND NEW BOOKS

MIND. Vol. XLIII. No. 169. Free Will as Involving Determination and Inconceivable without it: *R. E. Hobart*. Non-denotative Names: *Reginald Jackson*. Burnet's Socrates: *T. de Laguna*. A Set of Axioms for the Theory of Deduction: *Bernard Notcutt*. Discussions:—The Postulates for "Strict Implication": *W. T. Parry*. Note on Plato's *Republic* VI, 510C, 2-5: *A. E. Taylor*.

THE AUSTRALASIAN JOURNAL OF PSYCHOLOGY AND PHILOSOPHY. Vol. XI, No. 4. Inasmuch: *Richard Lawson*. Judgment (III) *W. A. Merrylees*. The Unconscious Significance of Fairyland (I): *Jean Mather*. Music and Science as Media of Rationality: *H. J. Wolfe*. Aspects of the Metamorphosis of Meaning: *P. F. Irvine*. Is the Theory of Relativity Sound?: *C. C. Allen*. The Experimental Investigation of Volition: *W. M. O'Neil*.

BULLETIN DE LA SOCIÉTÉ FRANÇAISE DE PHILOSOPHIE. 33^e Année, No. 1. Les Doctrines de l'Évolution et de l'Involution Envisagées dans leurs Conséquences Politiques et Sociales. Thèse: *Arnold Reymond*. Discussion: *C. Bouglé*, *L. Brunschvicg*, *A. Cresson*, *A. Lalande*, *D. Parodi*; *J. Renauld*, *L. Weber*.

NOTES AND NEWS

The Eugenio Rignano Prize offered by *Scientia* for the best work on "The Evolution of the Notion of Time" has been awarded jointly to Giovanni Giorgi, Professor of Mathematics and Physics at the University of Palermo and to Sigismund Zawirski, Professor of Methodology and the Theory of the Sciences at the University of Poznań, Poland. Their works were chosen from thirty-five competitors, a list of which was published in *Scientia*, August, 1933, p. 148.

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Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 24. November 23, 1933.

Studies in the Structure of Systems. KARL SCHMIDT.
Is Idealism Incurably Ambiguous? F. C. S. SCHILLER.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 25. December 7, 1933.

What is Speculative Idealism? JAMES BISSETT PRATT.
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Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 26. December 21, 1933.

The Logic of Measurement. A. CORNELIUS BENJAMIN.
Whitehead's Concept of Process: A Few Critical Remarks.
RALPH B. WINN.
Book Reviews. Journals and New Books. Notes and News. Index
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Volume XXXI. No. 1. January 4, 1934.

The Conception of Derivation in Epistemology. RAPHAEL DEMOS.
The Universe of Light. FREDERICK J. E. WOODBRIDGE.
Book Reviews. Journals and New Books. Notes and News.

Volume XXXI. No. 2. January 18, 1934.

Perspectivity and Objectivity. PAUL L. DELARGY.
Objectivity of Esthetic Value. CARROLL C. PRATT.
Book Reviews. Journals and New Books. Notes and News.

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Value Theory and Criticism by Orlie Pell. 81 pp. (paper cover) 75 cents.

Realistic Ethics by Annette T. Rubinstein. 137 pp. \$1.50.

IN PRESS

Studies in the History of Ideas. Vol. III. Edited by the Department of Philosophy of Columbia University. (Columbia University Press.) 500 pp. \$3.50. Contents: John Dewey: *An Empirical Survey of Empiricisms*; M. T. McClure: *Greek Genius and Race Mixture*; Richard McKeon: *Renaissance and Method in Philosophy*; A. G. A. Balz: *Cartesian Doctrine and the Animal Soul*; S. P. Lamprecht: *The Rôle of Descartes in Seventeenth Century England*; F. J. E. Woodbridge: *Locke's Essay*; Howard Selsam: *Spinoza; Art and the Geometric Method*; J. T. Baker: *The Emergence of Space and Time in English Philosophy*; Rudolf Kagey: *Coleridge*; Sidney Hook: *Hegel and Marx*; H. W. Schneider: *Mill's Methods and Formal Logic*; Ernest Nagel: *Impossible Numbers; a Chapter in the History of Modern Logic*; Gail Kennedy: *The Pragmatic Naturalism of Chauncey Wright*.

Aristotle's Theory of the Infinite by A. Edel.

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THE METAPHYSICAL BASIS OF INDUCTION

I

PLATO'S *Phaedo* represents Socrates as discoursing to his friends on the eve of his death. Socrates and his friends knew that this was the last time they would be together, for the jailer was soon to bring the hemlock which would end the life of Socrates (at least on earth). There was no doubt in the mind of any of these that the poison would cause the body to stiffen and the soul to depart. Socrates' joy at the thought of his soul's freedom from the shackles of the body and his friends' grief that he was soon to go were tacit but incontrovertible evidence that they accepted the validity of inductive judgments. This case is not an isolated one; of the same nature and carrying the same inductive presuppositions are the purchasing of texts for the new school year, the hiring of help by institutions of learning or by business establishments, the building of libraries, the construction of roads, the publishing of books and articles. You may deny the validity and reasonableness of these presuppositions, but you can not well deny the fact of their being. If you do deny their validity and reasonableness, then your actions now may not, on pain of contradiction, be said to have any effects; your actions may not even be said to be rational, for your mind can not be held to be efficacious, since it must sit dumbly, as if in a vacuum, and die for want of fresh air and solid matter.

I take it that the phrase "validity of the principle of induction" means that the act of asserting judgments about the future is a reasonable act. Furthermore, it is to be described as not only a reasonable act, but also as one that results in judgments that hold or are true of events that are not yet actual in their peculiar locus, with its peculiar network of relations, and in their peculiar individuality or particularity. Still, how can we meaningfully speak of these not-yet-actual events, these things that seem not to have enough substance to be so much as elusive? It is not too much, I suppose, to say that the act of looking into the future and of asserting judgments about it constitutes a quite vital part of human life, both practical and reflective.

Consider, for a moment, the purchase of two or three tons of coal. Why purchase this coal? Because, obviously, if there is to be steam heat to warm the house, or warmth in a room from a coal grate, or fuel for a coal range, two or three tons of coal are considered sufficient for a time, at least. No one, however, purchases coal for any of these purposes except upon the knowledge and under the assurance that coal burns and that burning coal radiates heat. It remains true, nevertheless, that the purchaser is not always in the presence of burning coal, and it is an experience too common and far-flung to need more than the statement that, when the coal is bought, the purchaser has very likely not even seen coal for two or three months. Yet he buys coal, content in the expectation that he will burn it in his furnace, that the water will boil, that the steam will be forced through the pipes, and that the radiators and, consequently, the rooms will be heated. How can he be thus reasonably contented? The burning of coal and the resulting warmth are not actually existent; they are events of the past, things that have been. The faith of the buyer looks to the future; the money paid for the coal brings neither fire, nor boiling water, nor steam; it brings just so much of a particular kind of thing. The money paid represents the faith of the buyer that certain results will take place; the money accepted represents the faith of the seller that the results expected will come to be. In this transaction, the future is involved; something not yet is bought; something still to be is sold. It is to be noted that this something not yet and still to be actual figures in the transaction *now*.

Consider, again, the purchase of a quart of milk. At the time of the purchase, I have not drunk it or a part of it; nor, for that matter, has anybody else. It is certainly not bought that it may be thrown away or gazed at as a thing of sempiternal beauty; it is equally certainly bought to be used as something to drink, perhaps, or to be used in cooking, or to be made into cottage cheese. Many quarts of milk have been used before, but this quart is intact; its use is a vision, an expectation, a foreseeing, a future event. Still, it is paid for *now*, and the payment involves also some "cash in advance" for certain results that are supposed to come to be from this quart of milk. The seller and the buyer accept the risk without a tremor: this particular quart of milk will give results in the near or far future identical with the results of quarts of milk consumed in the past. Boundless faith? Perhaps. Groundless faith? This question is the philosophical rub.

The purchase of two or three tons of coal or a quart of milk is simple enough; you pay your money, and you get value received. However, a bit of analysis is necessary. To purchase, to sell: these

are events, and events are not self-existent. It is fairly certain, I presume, that purchasing or selling does not bake bread, analyze arguments, drink milk, or enjoy the warmth of a cozy room when the thermometer registers zero. An event can not intelligibly exist as such, for it would then be a vacuous actuality (to use one of Professor Whitehead's admirable phrases), and a vacuous actuality for human beings is quite hopelessly meaningless. To have any sort of existence commensurable with the capacity of the human mind, an event must be referable to a substance, an agent, or a self, which serves as a string, so to speak, upon which the beads are strung. In short, it is a substance, an agent, a self that purchases or sells. The agent, or self, or substance that buys coal or milk thereby accepts its identity through time, for it is *this* self that is now the purchaser that is to be warmed through the coming winter, or that is to enjoy at a future moment the drink of milk, the oyster stew, or the cottage cheese. Furthermore, the purchasing agent or self, in buying the coal or milk, accepts the identity of this lot of coal with all past lots and with what this lot will be in the future, and similarly of the milk.¹

The self, then, along with some of the issues that it involves, namely, personal identity, the identity of the object, and the identity of the past, the present, and the future, constitutes the metaphysical basis of induction.

II

Authority of some weight has been thrown behind the position that induction has nothing to do with metaphysics, that induction is to be analyzed and explained on a mathematical basis, specifically on the basis of probability theory. This authority may have much reason for its view. At present, however, there is no way of showing with devastating conclusiveness that Omniscience is speaking through the exponents of the probability theory of induction, and the view that metaphysics and induction are intimately related is not nonsensical. Besides, it may be argued (and with quite a show of intelligibility) that mathematics is, in the end, inseparable from metaphysics. Our ability to discuss problems of one field without direct and explicit symbolical reference to problems of another indicates merely that we have the power and the right to draw the line. We forget, often enough, that the line is not spatial.

I do not believe that the probability theory of induction can be so cogently argued that it will deserve the honor of being called sufficient. Even were it admitted that induction can be explained somehow by probability theory, there remains the seething under-

¹ This does not necessarily commit me to the view that this identity is absolute and undifferentiated.

tone of feeling that something vital has been omitted. At least one basis for this feeling is that, despite the blanket authority with which mathematics speaks, there remains the thoroughly uncomfortable knowledge that, while the probability theory is relentlessly true as far as it goes, it omits the fact that no human being ever has gone or ever will go from past and present to future, or from particular or individual to universal or general, merely on the grounds that it supplies. It deals with fixed quantitative relations; as active human beings, we must needs, in fact, dip into flexible qualitative phenomena.

For example, if any given individual, *A*, knows that ninety-nine of the one hundred crab apples tasted by him were not to his liking, he will not be determined in his reactions at the sight of the one hundred and first crab apple by a strict mathematical calculation as to its nature and qualities. If *A* be sufficiently observant, he will be determined in his reactions rather by what he notices concerning its nature and general history: its texture, its resemblance in different respects to the one crab apple (of the hundred) that he liked, the tree it grew upon, the soil that nourished the tree, and so on. His statement that he will probably like this crab apple is made, not on the ground of a probability equation, but rather on the ground of an insight into the nature of the thing. The more the information brought to bear and the keener the analysis of such information, the broader and deeper the insight will be. This insight is not to be measured by a mathematical formula.

Probability equations are no guides either to universal knowledge or to specific action: not to the first because they represent quantitative knowledge to the exclusion of qualitative knowledge, and not to the second because actions are more basically grounded in the knowledge of the nature of things in their dynamic rôle of change and interaction with other things. In the case of *A* and the crab apple, all that probability equations can tell us is that the chances are against *A*'s liking the one hundred and first crab apple. Their rigidity necessarily leaves out of consideration the crushing fact of change in the taste of *A*. Furthermore, where there is darkness, there is no reason, if we restrict ourselves to inflexible equations, to choose the probability judgment in preference to the possibility that remains, for the undetermined factor, simply because it is undetermined, wields in the human mind an equally potent influence.

To some, however, the example considered may seem completely pointless so far as probability theory goes, on the ground, perhaps, that probability theory really deals only with rigid games of chance or with the occurrence of phenomena in the natural world. So be

it. Consider, then, the instance of flipping a penny. What are the chances that five heads will appear in succession? As it turns out, the odds are thirty-two to one against five heads in a row. This happens to hold forever and aye, regardless of how many times five heads in a row turn up. Thus, I suppose, is the strongest point of probability theory, which also happens to uncover its arid character. For, in the first place, all other things are assumed to be equal; but there's the rub. How shall we state the equational probability that conditions are or will remain the same, that the penny is not loaded, that the penny will be flipped with the same strength? We can determine these only by inspection. Equations tell us nothing of equality or inequality in fact, and we must, perforce, leave the crackling dryness of rigid abstractions and peer into the teeming forest of change and flux. In the second place, granting the austere truth of the equations, there is still no good reason to suppose, even if everything were equal, that the one possibility against the thirty-two odds is not the one that will take place to seventy times seven and more in succession. Improbable? Perhaps; but let it be remembered that the cry "Improbable" is founded, not in the bloodless roots of mathematics, but in the knowledge that is rooted in the fecund bed of time, change, and flux.

Where the probability theory of induction needs its greatest strength and where it manifests its greatest weakness is in regard to the prediction of so-called natural events in the natural world. What is so nourishing as bread? Yet, how are we to calculate the chances that bread will nourish in the future as it has nourished in the past? Water freezes at thirty-two degrees Fahrenheit. What are the chances that it will do so in the future? The sun warms the earth, water soaks through the ground, the planets revolve in their orbits, trees sway in the wind, the waves beat upon the shores, eggs may be fried in fat or boiled in water. What is the inductive probability that these occurrences, so well known as phenomena of the past and present, will continue to take place in the future? The answer is that you will either go mad on the spot or admit that there is no such thing. We may say that it is highly probable, so highly probable as to amount to a certainty, that the sun will continue to warm the earth so long as it shines. Nevertheless, this "probable" is not that of the strict adherents of the probability theory of induction. The latter, warm and placid in their sanctum, will likely sniff at this use of the term "probable," and may even go so far as to heap upon it such epithets as "absurd," "silly," "nonsense," "naïve." It remains overwhelmingly true that rigid equations do not transform actuality into equally rigid unity. If the equations of probability theory were sufficient, the epithets would be deserved

in very truth; but necessary in one sense or another though they may be, they are not sufficient unless experience contains no qualitative characters. It is here contended that the non-mathematical use of the term "probable" is as fundamental and as meaningful as it is thoroughly human, simply because it is grounded in qualitative knowledge and insight into phenomena and reality.

III

It is my further contention that the probability theory of induction assumes or involves certain arguments which fall within the field of the metaphysical grounds of induction. When it is urged that in flipping a coin the chances of its coming up heads or tails are even, it seems clear to me that the assertion of this proposition is not merely self-existent and self-intelligible. The proposition is more than its grammatical components; its grasp precedes the first word and extends beyond the last. Furthermore, the proposition is anchored, so to speak; it is enunciated by a self or an agent. In short, it is assumed that the proposition has held and will hold, and it is further assumed that the agent, self, or knower remains identical through time, for the proposition, if it is to carry conviction and universal obviousness, must be assumed to hold, not for just this moment for just this self at just this moment, but for every moment for *this* self at any moment, and for every other self at any moment.² Again, the proposition assumes the identity of the object, for it must be presumed to hold of 'the coin or of any other coin not only at this moment, but also of *this* coin' or of *that* coin at any and every moment. This involves the further assumption that the self or agent or knower sees, intuitively, or grasps the universal character in the particular object or occurrence, and thereby goes both backward into the past and forward into the future, for the past is present in memory, and the future is present in imagination or expectation. It appears to me certain and obvious that if these assumptions are held to be independent of the proposition, or if the proposition is held to be independent of these assumptions, then the proposition becomes just another exercise in intellectual word-jugglery. Any proposition, to be humanly meaningful, must be uttered on the avowed or unavowed but certainly basic assumptions that a self utters it, that the self feels at the present moment a basic identity with the past and foresees an equally basic identity with the future, and that *this* proposition is intelligible now and will be intelligible at a future moment.

The ramifications of the 'problem of how we go from past and

² This does not necessarily involve the view that time is merely discontinuous.

present to the future do not stop here. It is necessary to review briefly another angle of the problem. With the above paragraph in mind, let it also be remembered that past, present, and future are not to be conceived as in fact there, here, and yon, as if, perhaps, they were entities in space to which one could point as one can point at an egg or a cockroach. They are not spatial in any sense; they can not be picked up and handled. The past is remembered; the present is the realm of action; the future is anticipated.

To remember, to act, to anticipate: these three form the core of human life and the ultimate ground of reflection. The greatest of them is neither the first, the second, nor the last. The significance of this trio is that it hangs together, one for all and all for one; the function of each lends meaning and vitality to that of each of the others. To remember, to act, to anticipate: these can not be apart from the self. To consider them as thus apart and self-existent is tantamount to speaking of them as vacuous actualities. If to anyone it appears quite intelligible to speak of memory that is nobody's, of act that belongs to no one, and of anticipation that finds its home in no self, then it must appear intelligible to that one to consider them as actual entities without content.

Let us pause here for a moment and consider this question: How can we render intelligible the act of buying two or three tons of coal for a time not yet without considering the three phases of time as being vacuous actualities but as being real, existent, contentful?

In the first section of this paper, I pointed out that the buyer of the coal very likely had not even seen coal for two or three months. The coal bought is not burning when and has not been burned before it is put into the cellar. It is put by to be burned at a future time, with the expectation and assurance that it will act in the future as it has acted in the past. Still, the expectation and the feeling of assurance clearly do not take place at a later time; they take place now, in the present. When the coal is bought, the expectation and assurance are; otherwise, the buying would not have taken place. Nevertheless, the question arises: How are they now, present, when that which they represent is yet to be, not actual, in the future? It seems to me that a reasonable answer is that they are because the past has been what it has been: coal has burned, radiated heat, and boiled water in the past, and will do so in the future. However, it is equally clear that, in a sense, the past is something that has taken place; it is gone; it has been. And the further question arises: How are expectation and assurance present when that upon which they seem to be founded is apparently non-existent? Both questions are hopelessly insoluble if we presume either that the past, the present, and the future are analogous to

spatial loci, or that the past is simply dead, or that the future is simply not yet. In the case of any one of these presumptions we should be left with an isolated present, a bare unclothed point from which we could observe nothing because there would be nothing to observe and nobody to do the observing. It remains fundamentally true that the coal is bought because coal has acted thus and so, and because it is expected that coal will act thus and so. The action of coal in the past is not, like an untamed colt, something running wild in space; in a sense it has taken place, but in another sense, it is. It is now and present in memory. The knowledge of the past actions of coal is knowledge *now* of certain ways in which coal *has* acted; but knowledge *now* is knowledge of something that is, for there is no knowledge of what simply is not. If it be true that the burning of coal and the consequent radiating of heat are phenomena that are history, it is still true that they are *now*, present history. These past phenomena exist, but they exist in memory. It is this existence of the past in memory that forms part of the basis for judgments of the future.

Granted, however, that the past exists in this sense, it still remains a question as to how we can proceed to the future. Must we not admit, even if the existence of the past is not doubted, that we go from what certainly is to what equally certainly is not? The coal is bought now, but it is bought for the sake of what it will furnish at a later time. It is true, of course, that what coal will furnish at a later time is, in a sense, not present; it also remains true that in some sense it is. The vision, the expectation of these later effects is; the knowledge that coal will produce certain effects is *now*. This vision, expectation, or knowledge can not be said to be unless something of the future is also said to be, for any one of them must operate upon something solid; there is no vision, expectation, or knowledge in a vacuum. Hence, where there is an extension of thought forward to certain effects that are yet to come in their peculiar actuality, with their peculiar particularities, there is present with the present expectation at least part of the future. This part of the future that is present is what survives of the past in memory, along with certain universals which characterize this part, and with which thought makes intelligible to itself both the fact of the pastness of the past and the futurity of the future. The future is no cosmic mist; it is, in any case, a more or less definite envisagement of events yet to be because these events yet to be preserve some identity with events that have been. The expectation of burning coal and of radiating heat is intertwined with the memory of these things as experiences of the past, which, being present in memory, form, in part, the plank, so to speak, from which thought dives into

the not-yet-actual. This going forward into the future means that there has been an insight into the nature of the thing, a grasping of its essential character, in such a way that what is yet to be in actuality is seized now, in thought, in its universal or general aspects. This insight unites past, present, and future with an immediacy and a certainty that a philosophical wail of contradiction, rocking the farthest stars with its vibration, can not utterly demolish.

It must be noted, moreover, that *we* remember the past, and that *we* peer into the future. When do these activities take place? They take place *now*. We remember, we expect at a span of present time. Again, memory and expectancy are not of nothing simply, for to remember is to remember something, and to expect is to expect something. If remembering and expecting are, then their objects must be. However, remembering and expecting are not spatial in the sense that we can shake our fingers at them; they are temporal. Their objects are not in space as furniture is in a room; their objects are in time. Of time, we can know nothing except through memory and expectancy, and these two processes find their locus and their being in the self. Hence, their objects must find their loci and their being in the self.

It is the contention of this paper that every activity is not only referable, but also must be referred to a self. The past exists in memory, the present exists in thought and action, and the future exists in anticipation. Memory, thought and action, and anticipation are "mine" or "yours." We know that there is a past, a present, and a future because, and only because, the moments of time intersect or come together in the self. It is because each of the phases of time, each in a different sense, is present in the self that we can say that the past is identical (in part) and continuous with the present, and that the future is identical (in part) and continuous with the past and present. We can dip into the past and know something about what has been because we do begin and must begin from that part of the past which exists now; the present is what it is by virtue of what has been, and contains traces of the past by virtue of the continuous character of time wherein something remains present of that which, as we say, has become history. We can delve into the future and know something of what will be because we do begin and must begin from that part of the future which exists now; the present is what it is by virtue of what will be, and contains causative and noetic characteristics which forecast and identify events not yet in actuality, but present in imagination or anticipation, because of their identity with events of the past and present. The meeting-point of these three traditional parts of time, wherein they find their identity and significance, is the self.

If it be true that we have no way of knowing that past, present, and future are existents in their own right, and if it be true that these three aspects of time can not be abstracted meaningfully from temporality, and if it be true that they intersect in the self, wherein their identity is assured, and if it be true that their intersection in the self makes them identical (in substance, not in form merely, and in part, not in their entirety), then it seems to me to follow that it is in the self that we may find a satisfactory metaphysical basis for the inductive judgment. Just as it is true that we do not proceed or go from past and present to future as we go, for example, from Boston to New York, so we do not go from the particular or individual to the universal or general. Where the particular is there the universal is also, and where the universal is there the particular is in fact; else, language becomes impossibly meaningless. Brute irrational particularity exists hand in hand with sage rational universality; the former alone is dumb, while the latter alone is quite mad.

The problem of induction becomes unintelligible and the attempt to solve it as futile as trying to wash a blackamoor white when it is stated as the problem of going from past and present to future as if past and present were on one side of the fence and the future on the other. When it is said that water freezes at thirty-two degrees Fahrenheit, the proposition can not mean merely any particular bit of water now or any particular bit of water of the past. When we utter the proposition, we mean water, any water and at any time. We see or grasp or intuit the nature of water as water in a particular bit of water, and we predict its future character and activity, not because we have experienced every particular bit of water, but because we have achieved an insight into any bit of water when we have analyzed or experienced one bit. We can and do rest fairly certain in this knowledge, for past, present, and future exist, and they exist and are identical in the self or agent.

If it be objected that the identity of the self and the identity of the past, present, and future in the self are either childish superstitions or that such conceptions are indefensible or groundless, I point, in reply, to the whole structure of scientific knowledge. How can scientists formulate laws, hypotheses, and predictions in such a way that they will hold for the future unless such identity is assumed or taken for granted? Consider Galileo's laws for falling bodies. Galileo claimed to have knowledge of events that were not yet actual. The philosophical question is: How can such knowledge be made intelligible? I suggest that this is the correct formulation of the problem of induction, and the answer, as I see it, is that it is made intelligible by the fact of the identity of the self, which can

and does extend its arms, so to speak, backward into the living past and forward into the equally living future; and it can do this because the past, the present, and the future find their home and their identity in the self. Galileo gained an insight into the nature of the phenomenon of falling bodies; he perceived, not merely the peculiar circumstances that attended this or that experiment, but also the nature of falling bodies, and therein saw, in anticipation, the behavior of every falling body. His formulation held, not for him at this moment in regard to this falling body, but for him at any moment and for anybody at any moment in regard to any falling body. He thereby assumed his own identity of person, the identity of other persons, and the identity of the past, the present, and the future.

Consider Boyle's law, the laws of thermodynamics, the evolutionary hypothesis, the theory of relativity, the prediction of eclipses, the law of gravitation. These can not remain intelligible and not hold for the future, and if they do hold for the future, then there must be some identity between the examined instances upon which they are based and the unexamined instances for which they are obviously supposed to hold. The unexamined instances, while not present in their brute particularity, are present in the insight into the examined instances, the universal or general character of which is perceived and which carries over and remains identical from past to present to future. This identity involves and is inseparable from the self and its identity.

It is the contention of this paper that the self and its identity are the basic requisites of speculation and argument. It is also the contention here that the self and its identity, with other metaphysical aspects that these involve, constitute the groundwork of judgments that refer to the future. The proposition that coal will burn (as it has burned in the past and as it burns in the present) is one which holds intelligibly of particular burnings not yet actual, because the self is assumed to remain identical, because the past is present in memory and the future in anticipation, and because the universal or general characteristics of coal are grasped, intuited, or known in the examination or experience of any particular instance. This particularity, any particularity, in its massive, unbending stubbornness and irrationality, forms the rooting-ground for speculation; but for all its inexorable character of "thisness" it still has a history behind it and a future before it. The history, not being a vacuous actuality, flowers from the unyielding existence of a particular thing by way of recognizable and communicable universals with which reason feels quite at home; and the future flourishes into intelligibility from the relentless existence of par-

ticular entities through equally recognizable and communicable universals by means of which the self seizes or intuits the future because the future, to be understood by the human mind, must be present in one sense or another. These communicable universals are grasped and communicated by the self, and this operation, it seems to me, involves and necessitates the view that the self remains identical through time, hence that the moments of time intersect in the self, hence that the three aspects of time are identical; else, the resultant discontinuity denies both history and futurity.

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REPORT OF THE THIRTY-THIRD ANNUAL MEETING OF THE EASTERN DIVISION OF THE AMERICAN PHILOSOPHICAL ASSOCIATION

A PHILOSOPHERS' convention proceeds in a divided realm, one aspect of which is specified on the program by names and topics and the other subsists in an intermittent limbo indicated by a smoker, an annual dinner, and various unassigned time intervals. Presumably, an impartial and nimble observer—say the man from Mars—would record the former aspect as a series of occasions when the philosophers get down to the serious business of their craft, and the latter as a means for greeting old friends, finding new ones, and conversing *extra-cathedra*. But if this hypothetical visitor should himself become bitten by the philosophic bug might he not turn speculative and wonder, at least, to what extent the order and connection of discussions in the informal sessions at the Psi Upsilon House and the Lord Jeffery Inn resembled the order and connection of the topics formally attacked in Williston Hall? He might even make some notes on what it is to be a philosopher; but if not that, he would surely have an interesting and diverting tale to tell.

However, the man from Mars could not be located, and this report is only a résumé of the more impartible events of the thirty-third annual meeting of the Eastern Division of the American Philosophical Association at Amherst College on December 28–30, 1933. The genial atmosphere of the Thursday evening smoker was carried over into the first session on Friday morning where a symposium on "The Status of Mind in Reality" was the intended theme. It soon became apparent, however, that the symposium was to provide an opportunity for the idealists and the realists to confront one another in open warfare concerning an issue on which the opening guns had been fired in this *JOURNAL*¹: when is an idealist not a realist, and *vice versa*? The status of mind thus turned out to be

¹ See this *JOURNAL*, Vol. XXX (1933), pp. 169–178; 421–435.

more of a smoke-screen than a disputed territory. Whatever differences there may be between idealism and realism, the representatives of both parties found point after point on which to agree and found it not easy to ascertain what the shooting in previous wars had been about. Consequently, the symposium proceeded toward a convergence of views and revealed an increasing inadequacy in the metaphysical terminology which once served to express the insights of contending faiths. As for the topic of the symposium, it is lamentable that if not much light can be expected, a little heat can not be substituted.

Mr. C. W. Hendel defended the position that the status of mind is unique; that the description of natural objects and events is itself incomplete without a recognition of the rôle of mind; that "the mind is excluded from nothing that can be known and yet is never included in the matter that is known." After discussing the historical grounds of this position as they appear in Descartes and Kant, Mr. Hendel declared that alternative descriptions of experience and nature dispense with or demote mind by attributing categories and relations to space-time or to immediate experience, by regarding mind as nature's means of reconstructing active experience, by treating mind as a servant of nature which depends on objective conditions and incentives. This results from an emphasis upon the "temporal" or historical character of experience or reality; the regarding of knowledge and truth in terms of their generic development; and a consequent application of this historical method to all evaluations—which results in a relativistic view toward truth and value. However, Mr. Hendel maintained, a more adequate philosophical account of time and history must be offered. There has been a too exclusive consideration of the historical character of the real in terms of objective events. There is an alternative to "natural" history; namely, "history as it is real for a subject, time as it is the time of experience." While time has been thought of chiefly in terms of the natural world, there is another neglected mode of time which pertains to the life of the human individual. The very existence of history for man, by eliminating the relativity of standpoints, is the defeat of objective time. Mind thus transcends time and space and, as this transcendence is the distinguishing character of knowledge and morality as acts of mind, the status of mind is not natural nor are its objects limited to the natural world.

Mr. A. E. Murphy pointed out that the symposium was concerned with two problems: (1) the status of mind in nature and (2) is idealism realism? As to the first question, Mr. Murphy was acquainted with no satisfactory theory on the subject and believed

that no such theory is likely to be achieved until attention is directed away from the "barren controversy" between idealism and realism as a forensic opposition and directed toward the more fundamental problems of (1) discovering how independent facts or objects which *ought* to be the criteria of truth may be related to the actual and accessible criteria by which opinions and beliefs are tested, and of (2) showing how, without an appeal to subjectivism, metaphysical idealism may be applied to those aspects of a somewhat alien world which are not obvious embodiments of ideal meaning and purpose. The former is a job for the realist and the latter for the idealist; and they are questions whose answers must be sought for in what human experience will or will not justify with respect to philosophical theories about it. As all current philosophies are in the same boat because of their inadequacy to reconcile the apparent ultimacy of mind with the apparent ultimacy of nature, it would be helpful to seek a more generous solution by ignoring party lines. Regarding the question "is idealism realism?" there occurs a counter-question "is realism agnosticism?"; the answer seems to be that, in spite of its subjectivist affiliations, idealism "would like to be" and, in spite of its uncertainty, realism "would like not to be."

Mr. J. B. Pratt defined his position as that of dualistic realism and prefaced his analysis by asserting that the term "mind" should be taken in its common English usage as essentially subjective, individual, and conscious and that it should not be extended to the objective and impersonal. Mr. Pratt indicated a number of agreements between realism and idealism: mind is distinct from everything else in nature, all things are interrelated and characterized by their relations, physical objects are in part characterized by relation to mind, subjective qualities are real. However, it does not follow from this agreement that the realist will conclude that its relation to mind is constitutive of the physical object nor that "subjective" qualities can belong elsewhere than to the mind. While the necessities of biological evolution have enabled sentient beings to develop symbolic perception and thought and have given rise to the possibility of the knowledge of structure and process, we can not pretend to have knowledge of the inner nature of the external world; although our knowledge "meets fairly well the criteria of successful working and the possibility of prediction." If speculative idealism rejects mentalism and avoids naturalism by asserting universal teleology, will it not become simply a superfluous name for realistic theism?

Mr. Brand Blanshard started the discussion by saying that the issue between idealism and realism can be indicated by the op-

posing propositions: "nature is a fragment within mind" and "mind is a function within nature." He attributed the former belief to Mr. Pratt and the latter to the associates of Mr. Hendel, including himself. He asserted that realism is undergoing a double breakdown: the neo-realists, by having no place for mind, have produced the *reductio ad absurdum* of their own position; the critical realists, by agreeing with the essential views of the idealists, are losing their identity. Mr. E. S. Brightman pointed out that Mr. Blanshard's description amounts to the identification of mental and speculative idealism. Mr. Clifford Barrett objected strenuously to Mr. Pratt's "dictionary" definition of mind which evaded the consideration of mind as world order or world structure; he objected also to the introduction of the term "theism" to characterize speculative idealism.

The division took its luncheon respite very much in need of a paper on "ismism," but returned for the afternoon session, which was opened with a paper by Mr. Sidney Hook, entitled "What is Materialism?", in which he set out to hurl the *coup de foudre* into the idealism-realism tempest by claiming that materialism is the proper metaphysical opposite of idealism. Mr. Hook maintained that traditional distinctions are, however, inadequate. The assertion that only x exists, where x is defined as matter or as mind, becomes nonsense in that it patently disregards commonly admitted facts of experience. Where the *real* means a necessary condition or an independent variable and where x means an expected event, the assertion that x is real states only an order of dependence and translates the inescapable distinctions of science and common sense into adjectival differentiations of x . Thus the systems of materialism and idealism turn into isomorphic structures and "the presumed metaphysical differences turn out to be verbal." Mr. Hook contended that the sole intelligible difference between these philosophies is that of naturalism versus supernaturalism, atheism versus theism. If a discursive analysis of the *validity* of arguments for universal teleology or divine personality is possible, then the question is philosophic; if not, the issue is primarily a religious or socio-political conflict kept alive by a non-philosophic context.

Mrs. Grace A. de Laguna's paper on "Appearance and Orientation" suggested the thesis that in an extended sense of the term "orientation" or "standpoint" is essential both to perception and to thought. Reference to standpoint is a condition of objectivity and no discriminable datum is presented to immediate awareness; instead, all apprehension involves a standpoint even though the perceiver is not aware of that fact. "Seeing appearances is learned in childhood when we begin to draw." Mrs. de Laguna illustrated

her argument in terms of the elliptical appearance of the round penny when viewed in any other than the "straight-front" position. Wherever there is reference to standpoint, as there is in normal perception, the penny appears circular from non-privileged as well as privileged positions and, in order to catch the "apparent" ellipse it is necessary to suppress normal orientation. However, neither common sense nor epistemology is justified in ignoring the fact that, although the "straight-front" position predominates, it is still an essential reference not to be transcended.

The epistemological motive was developed from a somewhat different angle by Mr. C. J. Ducasse, whose paper "On the Attributes of Material Things" was a particularly lucid analysis of the assertion "this tree is green." Predications of quality were distinguished from those of property; when the sentence is interpreted as predicating a quality the reference is not to "this tree," but to a certain immediately given color, and the relation between the "seeing" and the "seen" is the same as that between dancing and the waltz that is danced: a relation of *occurrence* or *case to kind*. Thus qualities are subjective and a realistic supposition that the green color-quality may exist unperceived is absurd. If the intention is to predicate a property the tree itself is the true subject. Property is a causal concept, the relation between the "seeing" and the "seen" being that of *effect to cause*. When the effect involved is physical the property is primary (malleability, etc.); secondary properties produce a psychological effect (being green, etc.). "Real" and "apparent" colors (as predicated of the *tree*) are distinguished in terms of circumstances of observation which are considered as standard as contrasted with those considered as abnormal. Thus the realists are right in asserting the independence of material things, for a material thing is "a complex not of qualities but of properties possessed by a region of space at a time."

This paper and the one preceding evoked considerable discussion from Mrs. Swabey, Miss Sarah Brown, Mr. Paul Weiss, Mr. Blanshard, Mr. W. P. Montague and others; although the invitation to tea from the Amherst Department of Philosophy apparently held the epistemological appetite within reasonable bounds. When pressed to defend his definition of matter as properties possessed by a region of space-time, Mr. Ducasse replied that he had meant precisely what he said.

Following the annual Association dinner on Friday evening, Mr. C. I. Lewis, in his presidential address on "Experience and Meaning," presented a critique of logical positivism. He sought "to locate issues rather than to dispose of them" and to analyze the empirical-meaning requirement so as to avoid that reducing

to absurdity of knowledge and meaning which, he maintained, is implicit in the positivism of the Vienna Circle. Mr. Lewis employed a pragmatic account of knowledge and meaning to refute the assertion that empirical knowledge is confined to what we actually observe; on the contrary, as the essence of both knowledge and meaning is the *intention* to refer to what transcends immediate experience, "knowing begins and ends in experience but it does not end in the experience in which it begins." Anticipation or implicit prediction, as a dimension of empirical knowledge, involves an analysis of verifiability as a criterion of empirical meaningfulness. There are many degrees of verifiability, ranging from observability at will—by which one can assert the existence of his watch—to imagined verifications—concerning the other side of the moon—which can not scientifically be brought about. While the practical difficulties which limit the verification of beliefs are pertinent to the assurance of truth which knowledge demands, they are not necessarily relevant to meaning, for meaning is not limited to the here-and-now verifiable, but includes also those hypotheses which may be envisaged in terms of a possible experience as conditioned by the actual. Mr. Lewis indicated the bearing of this view upon the metaphysical problems of immortality, the independence of the universe from minds, and the existence of other selves; and concluded that, while these beliefs are unverifiable in perception, imagination is sufficient to give them empirical meaning.

Logical theory, the history of philosophy, and the visible world received each a share of attention in the Saturday morning session. In spite of the wide diversity of topics and the different methods of approach the excellence of all three papers and the liveliness of the discussions made this probably the most stimulating session of the meeting. Mr. Ernest Nagel read a carefully reasoned analysis of "Verifiability, Truth and Verification"; Mr. Raphael Demos unravelled "The Conception of the Psyche in Plato's Metaphysics" with rare penetration and urbanity; Mr. F. J. E. Woodbridge discoursed *de rerum natura* in a highly provocative paper on "The Universe of Light."

Mr. Nagel proposed that the operational theory of meaning requires that the verifiability of propositions be distinguished from their truth or falsity and that truth or falsity be distinguished from the process of verification, which has an evidential function only in terms of propositions not "verifiable once and for all." Propositions, he argued, are ultimately intelligible only on the ground of the structure of subject-matter; thus, in the order of nature, nature is prior to every set of principles, although in the

order of knowledge experience involves the use of structures more comprehensive than those of immediate experience. Hence, verifiability refers to the former order and verification indicates a procedure in the latter.

Mr. Demos challenged the traditional formulation of Plato's doctrine as a dualism of universals and particulars by considering the Psyche as a distinct metaphysical factor. Considered as *Nous*, the Psyche is a timeless actuality, a substance, which transcends the stream of consciousness, has its activity in pure thought, and exists apart from things. Considered as *Eros*, the Psyche is the author of the *mikton* in which the *apeiron*—the flux which contains private perspectives, appetites, the democratic man, etc.—combines with the *peras*—the limited which contains the non-referential, the universal, the self-sufficient man, etc.—to constitute the real. As a manifestation of *Eros* dialectic is a passage in the realm of thought among minds and theories; it is contrasted with fixation and intellectual complacency which constitute error. Thus *Eros* is process, desire, transition, creativity; as the love of the Good it is the motion toward the achievement of value, the primordial attraction of the actual by the ideal. There is, however, descent as well as ascent; man, nature, and knowledge decline, as shown in the myth of the *Politicus*, although Plato develops no metaphysical principle of evil to bring it about. Mr. Demos enriched his paper with a wealth of diverting aphorisms: "The oligarchical man is a monad without windows," "appetite is private perspective in the realm of values," "stand Freud on his head and you get Plato"—to mention only a few.

Mr. Brightman defended the interpretation of the *apeiron* as a principle of evil, particularly as Plato employs it in describing the world cycle; Mr. Demos, however, insisted upon the essentially neutral character of the *apeiron* with respect to good or evil. Mr. F. H. Anderson suggested that the application of the concept of the Psyche as motion whose noetic activity consists in the functional affirmation of an intelligible cosmos bridges the apparent gap between Plato's plan of elementary education and the later cognition of forms. Music and gymnastics are developments from the choral dance, which originates in man's perception of animal motion—man being the only animal that perceives the order of its movements. Hence "in science, as in choral *mimesis*, action and significance, motion and logical meaning, become a representation of, as well as a possession of, an orderly moving world."

As Mr. Woodbridge's paper has recently appeared in this JOURNAL,² it would be presumptuous to attempt here a summary

² Vol. XXXI (1934), pp. 15-21.

of it. During the course of the discussion Mr. Weiss suggested that a form of scepticism seemed implicit in the consideration of the universe as an optical realm; Mr. Brightman and others questioned the defensibility of discussing eye and brain as separable entities; and Mr. W. K. Wright thought that the term "light" had been used ambiguously to refer both to psychological and physical phenomena. In his amiable and somewhat disconcerting reply Mr. Woodbridge absolved himself from all epistemological queries on the ground of their irrelevance to his theme.

The length of the annual business meeting necessitated a hurried session on Saturday afternoon. Discussion was deferred until after the formal adjournment and the readers of papers (not to mention the listeners) had to sacrifice lucidity for speed.

In his paper on "The Principles of Evaluation in Aesthetics" Mr. A. Myrton Frye identified the esthetic experience subjectively by distinguishing it from the moral and intellectual response and objectively in terms of the ingredients (sensuous medium, significance, and form) which are common to all objects of esthetic value. Mr. Frye proposed three inter-related principles for judging degrees of esthetic value: (1) significance, which is determined by depth and comprehensiveness and is a quantitative rule; (2) complexity, which is the materialization of significance in the parts of a work of art and involves presentation to the senses; (3) integration, which applies the principles of form to relate significant parts to one another in terms of the whole.

Mrs. Marie C. Swabey, in her "Political Fictions, Norms, and Postulates," reasoned by analogy from procedures of natural science to those of politics. Defining a fiction as a mental construction which, although known to be somewhat contrary to fact, commands some belief in its theoretic truth or practical efficacy, she distinguished between fictions which, like the social contract theory, are myths and those which may be termed essential postulates or regulative ideas. Essential postulates as necessary assumptions include such elements as citizens, the greatest happiness principle, and the equality of men, taken as units, abstract referents of rules by which a political program promises to abide; they correspond to ideal meter-sticks in science. Regulative ideas, such as progress or freedom, no matter how disguised or defined, are commitments implied in the very effort to construct a unified theory, and serve as goals that arise in the course of the application of rules of procedure.

The meeting concluded with Mr. Carl F. Taeusch's description of the historical development of "The Concept of Usury." He traced the traditional ideological attitude toward usury from the

early Hebraic condemnation of taking advantage of the necessity of a borrower, and the Aristotelian opposition to increments on loans, through the medieval condemnations of speculative ventures and calculations of interest based on time, to the growth of capitalism, by which the traditional attitudes were pragmatically overruled. While Aristotle made the mistake of confusing the commodity value of coins with their instrumental value for facilitating exchange of goods, the Church erred in failing to distinguish between profits and interests. However, Mr. Tausch predicted, if capitalistic presumptions are overthrown the conceptual aspects of usury will again assume prominence.

"And so, Glaucon, the tale was saved and not lost."

JESSE V. MAUZEY.

ST. STEPHEN'S COLLEGE.

BOOK REVIEWS

Foundations of the Philosophy of Value. An Examination of Value and Value Theories. H. OSBORNE. Cambridge: University Press. 1933. xxii + 132 pp.

Theories of value have been, in Mr. Osborne's opinion, the characteristic contribution of recent thought to the field of philosophy. But the confusions and contradictions to be found in the multitude of theories has made it necessary that the further development of any one theory should be preceded by a critical analysis of the whole situation. The author has attempted to do this, and thus lay the foundation for a theory of value free at least from verbal confusions and logical inconsistencies.

First of all, he believes, two distinct problems in regard to value must be distinguished. It is the function of psychology, in the widest sense, to study the actual valuations that men make; it is the function of philosophy to investigate the "instinctive assumption" of mankind that values are objective to human beings and are a character of ultimate reality. Psychology, as a science, deals with the question of facts, philosophy with the question of validity. Since the validity of values involves the nature of reality, neither can be treated apart from the other. Theories of value can be understood only in terms of the metaphysics they imply, and "a complete system of philosophy must . . . be ultimately a philosophy of value."¹

Of the author's various classifications of value theories, the two most important are those of naturalistic versus non-naturalistic theories, and objective versus subjective. The distinction between

¹ P. xxii.

naturalistic and non-naturalistic theories, taken from Dr. Broad's *Five Types of Ethical Theory*, is the distinction between those theories which hold that ethical characteristics can be analyzed without remainder into non-ethical, and those which hold that a different quality, which they call value, exists in addition to the non-ethical qualities and their combinations. Under the heading of naturalistic come the psychological theories, differing among themselves, but agreeing in their rejection of any non-naturalistic quality; under the heading of non-naturalistic come realism, such as that of Mr. G. E. Moore, which holds value to be a non-natural, unanalyzable, non-relative quality, and idealism, which holds value to be constituted by a relation between moral beings and existence, the non-natural relation of "oughtness" or "obligation." The difference between these two larger groups extends into metaphysics in so far as one group affirms the existence of quality of reality denied by the other group.

The other important classification is that of subjective and objective. By subjective the author refers to those theories which define value in relation to mental states that are non-cognitive, i.e., do not give us objective reality. Objective theories are those in which value is not dependent upon a mental state but are, epistemologically speaking, objective. The subjective theories, for which the author has little use, are the psychological and the social. In the former, value is defined in terms of some non-cognitive mental activity such as desire or interest. The great weakness of these views, as Mr. Osborne sees it (and he speaks particularly of Meinong, Ehrenfels, and James Ward) is their inability to distinguish between the peculiar quality of moral obligation in contrast to mere desires, with a resulting relativism in ethics which the author considers fatal. Such theories, he believes, exclude by their very definition of value the possibility of investigating the question of validity, which to him is the major problem in the philosophy of value.

Social theories of value attempt to avoid ethical relativity by going beyond the individual to find norms in the good of the group. This point of view, especially as developed by Dr. F. R. Tennant in his *Philosophical Theology*, receives more sympathetic treatment. But still Mr. Osborne feels it is unsatisfactory in accounting for moral obligation. To say "this is socially valuable" is not to say "I ought to do it," and it is even farther from saying "all men ought to do it." This type of theory may maintain that men do feel obligation towards what they consider "social values," but it can not say whether or not they are right in this feeling. It leaves us still with the validity of the "ought" unaccounted for.

In contrast to the subjective are the objective theories, in which

value is not dependent upon the valuer. The most important of these are realism and idealism. Such realistic value theories as that of Mr. Moore can never be proved or disproved, for there is no way in which either the existence of the intrinsic quality or the intuition of it in any particular instance, may be tested or verified. That so few people are aware of this ineffable quality of value as an ineffable quality may make us dubious, but can not disprove its existence. What damns the theory in Mr. Osborne's eyes is the fact that it provides no necessary connection between the intuited quality of value and moral obligation. A connection can be made only by assuming a further intuition, such as, "I ought to do that which brings objects having value into existence." Thus for an ethics based on the realistic value theory, three separate acts of intuition are necessary: (1) that there is such an ineffable quality of value; (2) that this case in question is an instance of such a quality; and (3) that there is a connection between such a quality and moral obligation.

Idealistic value theories agree with realism in being non-naturalistic and objective, but differ from it in having only one indefinable and ultimate notion, that of "right" or "oughtness." Value is defined as the property of being an object toward which moral agents have an obligation, an object to which they are related by the unique relationship, Right. Ethical value is the property of being an object for which it is Right that approval be felt; esthetic value, Right that admiring contemplation be experienced; religious value (for those who recognize it) Right that religious adoration should be directed. Truth also may be a value, involving the obligation of intellectual acceptance, or it may be subsumed under the ethical obligation of approval.

The idealistic theory, Mr. Osborne admits, can no more be proved than could the realistic. But it has the advantage over realism of greater logical simplicity because of its fewer initial assumptions; and it has over psychological theories the advantage of escaping ethical relativism, which, the author believes, is repugnant to the consensus of opinion of mankind. Indeed his strong conviction that idealism is actually a clarification and elaboration of the natural and instinctive assumption of common-sense ethical thought, leads him frequently to the use of such expressions as "instinct of idealism," "idealistic impulse," etc.

However, in equating value and oughtness, Mr. Osborne recognizes and faces squarely one problem, namely, that while moral obligation requires us to obey our conscience, our conscience may be and frequently is mistaken. This dilemma is solved by assuming that over and above the narrower ought, which applies to a given

individual in a given situation, is a wider ought, applying unconditionally to an idealized moral agent, "a moral being as such."² Whether such a Being exists or not is a question for religion; for idealistic ethics, the concept of such a being is sufficient to define that absolute obligation which transcends the limitations of all particular persons and situations. Let ethics, says the author, assert less than this absolute obligation, and it becomes a branch of sociology.

We have in this book a clear presentation of an idealistic, neo-Kantian value theory as the basis for an ethics and a metaphysics. Whether such a theory is, as the author believes, the only one consonant with the ethical feelings of mankind, it is left for the reader to judge.

NEW YORK CITY.

ORLIE PELL.

Self, Thought and Reality. A. C. MUKERJI. Allahabad: The Juvenile Press. 1933. xiii + 410 pp.

The author, a Reader in Philosophy at Allahabad University, undertakes in this book "to lay the epistemological foundation of a theory of self" (p. 2). The theory of the self proposed is, in the main, that of transcendental idealism, and the epistemological foundation is Kant's proof that the ego is not an object among objects, but rather "the ground or presupposition without which Reality cannot manifest itself" (p. 329). About three-fourths of the book is devoted to a competent and judicious review of the main teachings of British idealism from Green and Caird to the present and includes an interesting attempt to disengage the essential truth of "speculative idealism"—"the belief or doctrine according to which thought is the medium of the self-expression of Reality" (p. 45)—from the mentalism which holds that it is only for a mind, finite or infinite, that objects can exist. Mr. Mukerji's own view is that things are discovered, not created by mind, but "the manner in which they exist, and the relations that obtain among them, would be nothing *for us* if they were different from what are realized or realizable in the knowledge relation" (p. 123).

The epistemological analysis of mind, which investigates the conditions of objectivity, is held to be philosophically more ultimate than the psychological which, presupposing such objectivity, treats mind as an object in the natural world. In this way we avoid "the fallacy of decentralization of the ego" (p. 365) and prepare the way for a metaphysic in which the self enjoys a very high place indeed. What this place is to be remains, however, somewhat unclear, as the

² P. 104.

final chapter which seemed to be leading up to a statement on this matter becomes involved instead in an exposition of alternative versions of the teachings of Sankara and ends inconclusively. The book as a whole is a useful and workmanlike treatment of its subject.

A. E. M.

Idealistic Logic. A Study of its Aim, Method, and Achievement.

C. R. MORRIS. London: Macmillan and Co., Ltd. New York: Macmillan Co. 1933. Pp. ix + 388. \$4.35.

Mr. Morris has written a helpful survey of the achievements of idealistic logic, for while he is thoroughly in sympathy with its aims, he is nevertheless quite ready to point out some of its inadequacies.

He takes logic to be the theory of thought and mind, and the chief merit of his book consists in a good statement of the issue between traditional and idealistic logic; its weakness lies in viewing logic in this manner, and so interpreting scientific method in terms of a transcendental machinery. Knowledge according to the traditional logic is immediate perception of the universal in the particular, so that the theory of the apprehension of self-evident premises is the chief concern of Aristotle. This is a false theory of thought to the idealist, for thinking is declared to be a discursive operation; a judgment is never final, since it is always modified and corrected by a developing system of judgments. This operation, moreover, is qualified by the nature of the thinking mind, for mind is spontaneously active, *producing* a systematic unity and not simply reproducing one. How the mind can be spontaneously active in this sense, and yet know a world independent of the thinker, is a central problem for idealism,—a nut which Mr. Morris reluctantly admits it has not quite cracked.

Many of Mr. Morris's dissatisfactions with idealistic logic are brought out in examining Cook-Wilson's "reactionary criticism" of modern idealism. While it has analyzed the actual operations of thought in physics, thus taking its cue from Kant, its conclusions concerning the necessary forms of thought are not supported by non-mathematical sciences like biology. While it has shown that all statements in the empirical sciences are essentially corrigible by the developing system of judgments, it has failed to prove this for mathematics where there is no such system-making. In the coherence theory of truth it has cut the ground from under itself for explaining the advance of science from one coherent theory to another. And while it has shown that there are no "brute facts," it has left unexplained how the element of immediacy present in all thinking functions therein. His conclusion is that although idealistic logic began with the proud claim of establishing *a priori* how

the forms of thought determine the character of experience, its solid achievement is simply offering a defense of science against Humean scepticism of the possibility of knowledge.

A less sympathetic critic of idealistic logic would surely claim even less for it. He would point out that many of the characterizations of Aristotle are mistakes which arise from taking an account of the nature of systems for an account of thinking. And he would show that science can be "saved" from the sceptic without appeal to the transcendental mental furniture so much preferred by idealists. But in any case he would thank Mr. Morris for having made some of the important issues of philosophy clearer.

E. N.

A First Book in Logic. HENRY BRADFORD SMITH. New York: F. S. Crofts & Co. 1933. Pp. x + 177, vii + 90, and 36. \$3.00.

This is an "omnibus" volume, which contains Professor Smith's well known text of 1922 to which two appendices (also reprints) have been added, his entertaining collection of fallacies first published in 1923 under the title "How the Mind Falls into Error," and a new 36-page exposition of symbolic logic. The last-mentioned and the first appendix discuss authoritatively the differences between the Aristotelian and Boolean systems and the possibility of intertranslation between them, and point out, for example, that syllogisms in *Darapti* are valid in the former, since class-inclusion is defined otherwise than in the current calculus of classes. The second appendix is a thumb-nail picture of Professor Smith's theory of multiple implication, but is far too sketchy to be of much value for the beginning student.

E. N.

Ethics. An Introduction to the Philosophy of Moral Values. CLIFFORD L. BARRETT. New York and London: Harper and Brothers. 1933. Pp. xi + 484. \$2.75.

This book is what its subtitle states it to be, "an introduction to the philosophy of moral values." It deals first with traditional ethical theories, the Sophist being presented as the advocate of moral individualism, the Epicurean as that of pleasure, the Stoic of universality, Plato and Aristotle of ideal aspiration, Kant of moral dignity, the Utilitarian of social happiness, the evolutionist of progress. In this way the course of ethical thought is traced with notable economy. The second half of the book attempts the application of the results of this survey to current problems. It discusses economic justice, political authority, the family, the concepts of freedom and self-realization, and concludes with one chapter draw-

ing the inference that morality means the organization of a rich diversity of values, and another outlining contemporary theories of value. The presentation is always lucid and fluent, the style excellent, the attitude critical yet broadly tolerant, so that the book provides an excellent text for the class-room, and should find much use. Whether the method known as value-philosophy is more than a vague eclecticism, whether it will recognize that classical theories and our conventional values are already attempts at or instances of an integration of interests, and whether it will proceed to a new, specific, and authoritative integration guided by a deeper analysis of our concrete social evolution than we have as yet achieved—these questions must remain open in an epoch that swings still between Protagoras and Plato. They need not obscure the usefulness of value-philosophy as an introduction to this larger and more hazardous task, and as a reminder of the achievements of the past in this business of reconstructing the theory and practice of human behavior.

HUGH MILLER.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES.

America's Social Morality; Dilemmas of the Changing Mores.

JAMES HAYDEN TUFTS. New York: Henry Holt & Company. 1933. 376 pp. \$2.40.

Professor Tufts here draws a skilful portrait of the conflicting standards which are being applied to current social problems in America. His aim is to describe American society neither as it is nor as it ought to be, but as it judges itself. The confusion of moral standards holds the foreground of the picture, and Professor Tufts does not spoil it by interpreting it in the light of a single standard nor by formulating a standard whereby to judge standards. This moral portrait of American society is not, however, a mere photograph; it is enriched in every detail by the author's long experience, genial sympathy, and philosophical insight. In addition to his own practical experience he brings to bear on these social problems the perspectives of American history and the distinctive traits of American tradition. This freedom from preoccupation with formal ethical theory or with social philosophies based on European experience gives his analysis a freshness and directness unequalled in contemporary social ethics. Professor Tufts has, to be sure, a somewhat over-simplified formula for the history of American social problems and values, distinguishing three periods in American life dominated successively by religious, political, and economic interests; but he does not insist on it or abuse it.

The moral problems discussed are those of work and leisure, class

and race, suicide, sex, business, industry, property, government, "the lawless strong," "the lawless officers of the law," crime, vice, and international relations." Few persons could embrace so wide a range of practical social ethics with the genuine information and penetration displayed by Professor Tufts; and no other book offers so judicious a survey of contemporary literature and opinion on these subjects.

H. W. S.

Orthodoxy in Massachusetts, 1630-1650: A Genetic Study. PERRY MILLER. Cambridge: Harvard University Press. 1933. xvi + 353 pp. \$3.00.

Dr. Miller freely acknowledges his audacity in attempting to tell, in this Marxo-Freudian era, "of a great folk movement with an utter disregard of the economic and social factors," thus "laying himself open to the charge of being so very naïve as to believe that the way men think has some influence on their actions." At least the men who led the Great Migration to Massachusetts, bringing with them notions which had long been maturing in England, "took religion seriously" and in terms of ideas. Dr. Miller lets them speak extensively for themselves, perhaps, as he suggests, "overlarding his text with quotations" in the process. The result is an extraordinarily thorough, solid, and at the same time stimulating religious and political history of the first two decades of New England Puritanism.

The Reformation in England bred sects which were no less than absolutely sure of the self-evident righteousness of their own positions, both in theology and in church discipline: among them Anglicans, Puritan Presbyterians, Non-separating Congregationalists, and many sorts of Separatists. Most difficult of all these rival polities to defend was Non-separating Congregationalism, which, according to Dr. Miller, was exactly the faith which was predominant among the founders of New England. By amazing feats of casuistry the latter laid in England the shaky foundations for the compulsory uniform assent to a dissenting program, neither Anglican, nor Separatist, nor even Puritan Presbyterian, which they subsequently sought to enforce in Massachusetts. Congregationalism did not spread from Plymouth to Salem to Boston; it did not need to; Boston had already set up an incongruous Congregationalism as its state religion, the invisible and visible churches at last made one, as an "object-lesson to an erring world." Of course this covenanting fellowship of "atomistic" individuals could not supply the cohesion necessary to maintain the desired orthodoxy under New World conditions; but it did produce a number of nimble thinkers who lavished

untold ingenuity upon the dilemmas of Non-separating Dissent and Non-democratic Congregationalism.

Within his announced limits, Dr. Miller has produced a masterly exposition, lacking neither in scope nor in detail, of the New England Way from its genesis in England to its consummation in the *Cambridge Platform* of 1648. His own interpretation may be disputed, but he has furnished an indispensable groundwork for further debate among students of American thought. His brisk style lends a sparkle to many otherwise dull passages. A bibliography, an index of names, and copious footnote references are supplied.

H. A. L.

JOURNALS AND NEW BOOKS

THE MONIST. Vol. XLIV, 1. A Reconsideration of the Hegelian Forms: *J. S. Moore*. The Essentials of Hegel's Spiritual Monism: *J. E. Turner*. The Inductive Argument for Subjectivism: *D. C. Williams*. Some Realist Theories of Illusion: *T. A. Goudge*. Can We Act against Our Strongest Desire: *A. C. Ewing*. Discussions—Note on Alternative Systems of Logic: *Y. L. Chin*. A Modification of the Theory of Types: *A. Ushenko*.

Maritain, Jacques: *Personality, Property, and Communism*. Reprinted from the *University of Toronto Quarterly*, Vol. III, No. 2 (January, 1934). Pp. 167-184.

NOTES AND NEWS

Dues for the American members of the *Kant-Gesellschaft* have been reduced from the usual fourteen marks to ten marks for the year 1934, on account of the depreciation of the dollar. The amount may be sent direct to the Sekretariat, Privat-Dozent Dr. Helmut Kuhn, Berlin-Dahlem, Gosslerstrasse 29, Germany; or it will be forwarded on receipt of \$4.00 (which includes exchange and postage) by the American Chairman of the *Kant-Gesellschaft*, Professor Edgar S. Brightman, Box 35, Newton Center, Massachusetts.

A series of twelve weekly lectures on "The Philosophy of Edmund Husserl" will be given by Dr. Dorion Cairns at the New School for Social Research, New York, beginning Friday evening, February 16.

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IN PRESS

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THE JOURNAL OF PHILOSOPHY

NEW EPISTEMOLOGICAL METHOD

MAN is equipped with sensibilities, and he is capable of shocking any one or all of them. Some of them are idiosyncratic, and ought to be shocked. Others are as natural and as perennial as the green of grass. These, though malleable, should be protected against mauling. The theme of this essay is that man's perceptual sensibilities are chief among those that ought not to be shocked by any theoretical construction, and that therefore it is well for the theorist to be content with, and count as probably true, only those theories which do no violence to perceptual sensibilities. I shall attempt to show how it is possible to do theoretical violence to perception, which itself seemingly asserts nothing about the distinction between appearance and reality, and finally to make an appeal on behalf of a new epistemological method whereby the philosophically unwholesome procedure of abusing the perceptual situation shall be discontinued. I shall suggest a new spirit of investigation which demands greater patience and skill on the part of the epistemologist, but which, if assumed, will probably inject fresh blood into epistemology and bleed out the stale.

The enterprise calls for a three-fold distinction to begin with. Firstly, there are perceptual data, objects of sense-perception. I say *sense-perception* to indicate that "perception" is not here to be used in the broad sense in which, say, Locke used it. Secondly, there are the propositions which simply report or describe perceptual data. Let us call them "sense-perceptual propositions." In the third place, there are the propositions which either describe perception itself or assert the reality or unreality of what appears to be the case in perceptual situations. This is the class of propositions with epistemological and ontological import.

I find it impossible to proceed without this triple distinction clearly in mind, because I am looking for something which I can definitely call "commonsense,"¹ and the distinction provides me with this something. Perceptual data or the objects of perception do not constitute commonsense. Commonsense is a body of propositions exposed to belief or disbelief. On the other hand, neither is

¹ For convenience, I use the single, unhyphenated form of the word. The term is to appear frequently as an adjective.

the class of epistemological and ontological propositions identical with commonsense, since these go beyond what perceptually appears to be the case to the affirmation or denial that it is really so. Commonsense is the class of sense-perceptual propositions, which simply report what appears in perception. In short, any sense-perceptual proposition is a bit of commonsense as here defined (and conversely), but it is not as yet a part of an epistemological or ontological theory. The new method formulated in these pages defines "commonsense" thus. Though the term has been assigned other meanings, our argument considers this one only.

To clarify the triple distinction above, let us comment further on each of the three distinguished items. This will introduce us, with due ceremony and by comfortable degrees, to what is to be called the Commonsense Principle.

(1) Perceptual data: defenders of constructionism may object to the phrase "perceptual datum." By "constructionism" I mean epistemological theories which are associationistic, sensationistic, positivistic, phenomenistic, idealistic, etc., whose common conclusion is that significant objects of perception are constructions or "construements" of the percipient, whose *data* are meaningless "sensa." However, the sense in which I use "perceptual datum" is not theoretically loaded. Any configuration of qualified terms in relation which appears in perception is in this non-theoretical sense termed a (complex) perceptual datum, be it in fact a construction or not. I distinguished such data from propositions reporting them, merely to indicate that the former do not constitute commonsense. This meaning of "perceptual datum" is further defined by consideration of the second item.

(2) Sense-perceptual propositions: an example of a sense-perceptual proposition is, "It appears that there is a white stag grazing in that green glen below." The prefix "It appears that . . ." need not always accompany a sense-perceptual proposition, but in this example it is adjoined to illustrate the theoretical innocence of the subsequent assertion. "Appears" here obviously does not signify "merely appears" with a sense for the distinction between appearance and reality. The indication and assertion of this distinction do not here occur. Propositions of this order (2) constitute the domain of commonsense proper. It should be noted that commonsense is never false: the prefix "It appears that," though not always explicitly stated, is to be understood as accompanying a proposition of commonsense. That is, sense-perceptual propositions are always true, and if the percipient should deliberately misrepresent what appears to him in perception by asserting something not given, the resultant proposition would indeed be false as claim-

ing but failing to describe what is perceived, but it would not be a sense-perceptual or commonsense proposition. "It appears that . . ." could not truly be prefixed to it, and this prefix can truly occur in any bit of commonsense. This gives us a clew as to the nature of perceptual data. They are generally significant, four-dimensional complexes, judging from such commonsense reports as the above about the stag at a distance in the glen. They may, however, be of the "thinner" sort, as for example the datum reported by the proposition, "It appears that there is a white patch with an elongated shape." Commonsense may represent either one of these "thick" and "thin" kinds of data, and favors neither, since commonsense is not as yet a theory about anything. It is simply a set of true propositions about what perceptually seems to be the case. But what of such propositions as, "I am looking at an unreal pink rat," or, "I perceive a real brown rat"? Are they not sense-perceptual? This brings us to the third item.

(3) Theoretical propositions: by this term I mean the above-mentioned class of epistemological or/and ontological propositions. The propositions about the real and unreal rats are not strictly sense-perceptual because they distinguish between *mere* appearance and reality. They belong therefore to this third class. One does not see that a certain rat is *real* in exactly the same sense that one sees it is a dirty brown. Consequently these two propositions are not bits of commonsense. Unlike commonsense, they are true or false, and they are true or false of what *really* is the case. Such propositions can not contradict or be contradicted by commonsense. "It appears that the brown of the rat in that trap is on the rat's surface," and, "The brown of the rat in that trap is not really on its surface," are propositions which might both be true at once, the former merely reporting what perceptually seems to be the case, the latter reporting—truly or falsely—what really is the case. Now if epistemological or ontological propositions can not contradict commonsense, in what sense is there a quarrel between them and it? How, if at all, do they "violate" commonsense, or even gratify it? Can a theoretical construction shock or gratify commonsense when commonsense itself has nothing to say about mere appearance and reality? How, if at all, can a man's "perceptual sensibilities" be shocked by theory, if they constitute the non-theoretical foundation upon which a theoretically innocent commonsense rests? The answer is clear. As long as we take commonsense rigorously as defined, there can be no violation, no contradiction. These simply could not occur. But contradiction and violation of a very appreciable sort do occur, and of a sort usually described as between theory and commonsense. Let us now observe what hitherto un-

noticed factor is involved, which produces either the conflict or the gratification.

This additional factor is what I shall call the Commonsense Principle (C. P.). It reads thus: what *appears* to be the case in veridical perception is *really* the case, and perception is sometimes veridical. This, we might as well at once grant, is not itself a sense-perceptual proposition, hence may be either true or false in the manner of epistemological and ontological propositions, among which it belongs. The fact that the principle does not evidence itself, or that it may be either true or false, gives point to the new epistemological method. I suggest, for reasons yet to be given, that the epistemologist show a far greater tenacity than he is wont to do in *postulating* this principle, and then proceeding with analyses and explanations whose conclusions are never permitted to be inconsistent with this postulate, counting his failures to formulate such theories, not as indication of their falsity but rather as indication of intellectual impotence on his part. But, before taking up this main issue, let us devote several paragraphs to the elucidation of the meaning of the C. P.

The C. P. assumes (1) a distinction between mere appearance and reality, i.e., that not everything that seems to be the case is really the case, (2) that some cases of "seeming to be" are cases of "really being," (3) that what seems to be the case in veridical perception belongs to class (2), and (4) that there are cases of veridical perception. The fourth assumption is included in the C. P. in order to yield a contradiction between the principle and what might conveniently be called the "maya" (illusionistic) theories of perception as, for example, Bradley's theory, according to which what appeared to be the case in *veridical* perception would indeed by definition really be the case, but in fact no such perceptions ever occur.

Light is thrown upon the import of the principle by considering it from the point of view of the question, what general kinds of theory does it permit or prohibit? Does it, in a positivistic manner, force a denial of trans- or meta-perceptual reality, such as the imperceptible microcosms asserted in quantum physics or such as the Platonic form of the Good? The C. P. neither denies nor asserts in this regard. It asserts only that what appears to be the case in veridical perception is really the case, and hence by implication that any metempirical proposition which contradicts commonsense—a commonsense become ontological by the admission of the C. P.—is false. This leaves much room for imperceptible realities and metaphysics, without asserting anything about the possibility or impossibility of metaphysics. And it is incumbent upon epistemologist and ontologist alike to ascertain whether the contradictions between

commonsense on the one hand and physics and metaphysics on the other are real, or due only to lack of adequate interpretation. Many apparent contradictions are *merely* apparent. Now what of constructionism in general? It need hardly be said, at this stage of the exposition, that compliance with the new method *might* consistently lead to constructionism as an explanation of knowledge and of things. Many constructionists would agree that what appears to be the case in veridical perception is really the case. The form of (maya) constructionism which denies this, however, by affirming that sense-perception involves a kind of veil between the percipient and real *Dinge-an-sich* would violate the C. P. Much constructionism goes this limit. And what of objective relativism? Again the answer is clear. The proposition, that certain qualities inhere in places from places, and the C. P. might both be true at once. There would be conflict only were the objective relativist to assert that qualities in veridical perception seem to be where they really are not. This he does not assert.

Of the theories which result from a failure to comply with the C. P. there are two general kinds: the maya theories of perception and most forms of dualism. Enough has been said of the maya theories to indicate a conflict between them and the principle, but something more should be said about dualism. One of the strongest arguments for epistemological dualism is from the space-time interval or causal transaction between the physical object and the percipient-organism. Now it seems to me that only a very feather-brained person would deny this interval, which is almost sensible in the case of auditory experience. The C. P. calls for no such incautious and evasive procedure. What it does call for is a reconciliation of this fact with the fact that, say, the perceived color appears none the less in veridical perception to be on—hence really qualifies in the non-Pickwickian sense—the surface of the thing that is called the physical object. What the average physicist calls the physical *and real* object is the thing he often puts under a microscope, and that is precisely where the color of that thing appears to be in that situation. The C. P. requires an explanation of these facts which allows, without distortion, for all these very apparent features. Of course, *if* the physicist has positivistic propensities and argues that the physical object is a mental construction based upon sense-data and hence not eminently *real*, then, though there is still dualism of a kind, it is not, as we have seen, of the kind that overtly conflicts with the C. P. What has been said in defense of the positions of colors is also to be said of sound. If it appears in veridical perception that a sound centers about (though it is not confined within) an audible event, then that is really the case, and

it is up to the theorist to explain this *without concluding* that the sound, qua sensible quality, does not *really* center about the audible event.

In this exposition, the phrase "veridical perception" has frequently appeared. Since "veridical" has to do with truth and reality, it may seem that I have almost tautologically begged the question, and gone far beyond a mere methodological postulate, in using the term. I may seem merely to have said that a perception which is not mistaken (veridical) is not mistaken, and hence have said nothing significant. An adequate exfoliation of the meaning of "veridical perception" would indeed take us into the heart of epistemological theory. Since we are here concerned with method and a spirit of inquiry, I shall do nothing more than naïvely suggest a possible meaning of the term, with the reminder that it is only one of several which are consonant with the new method. First, I shall provide a test for perception. When a percipient with unimpaired sense-organs is awake, and known by himself and several other percipients with unimpaired sense-organs to be awake, and when there are no distorting agencies either in the region intervening between him and the object (such as water, glass, haze, etc.) or in his organism (such as *santonin*, high fever, etc.), then the object of his perception really is as it appears to him to be in that physical perspective, and his perception is veridical. The phrase "in that physical perspective" indicates that not all the perceptible properties of the object are perceived at once, though the properties which *are* thus perceived are some among the real properties, and they inhere *as they seem* to inhere in the object.

This is a test for veridical perception, not a definition of its nature. Veridical perception may and usually does occur without, or prior to, the application of this test. A solitary percipient, not explicitly aware of the fact that he is awake, may enjoy veridical perceptions. We may therefore give a tentative definition of veridical perception by simply striking out the clauses from the above test which require several witnesses and knowledge of wakefulness.

The test and definition give rise to a serious question, the answering of which would lead us still farther into theory. Does not a distorting agency of some sort operate in *every* perceptual situation? Again the best I can do here is to suggest that, in cases where percipients believe that and behave as if there are no such agencies without encountering reasons within the perceptual situation itself for reforming their belief and behavior, then, in these cases, there are no distorting agencies. This does not assert that there are no perceptual *media* at all in such situations, but only that none exist in them which distort perception. We all know what "transparent"

means, and how, for example, the atmosphere may or may not be a distorting medium, depending on the presence or absence of large space-intervals, haze, etc.

The motive which prompts these assertions is the simple experience I so often have of first seeing an object indistinctly, then moving (if possible) into a position from which I perceive it clearly, and of then feeling that, whatever other properties the object may have, it certainly has those properties which it appears to me to have, and *as it appears* to me to have them, in that perspective. In spite of recurrent sophistications, this feeling continues so strong in me that, rather than subscribe to theories of perception which involve a denial of these irresistible appearances, I should with Hasan² and others call perceptual knowledge a fact *sui generis*, opaque to epistemological curiosity, but none the less a fact. However, I have as yet encountered no reasons for such intellectual resignation. But this "confession of faith" would have appeared more rational had it occurred in the concluding paragraphs of this essay. I beg the reader to be patient.

The spirit behind this test is well brought out by reformulating it in negative terms. If, after careful scientific and non-scientific examination of the perceptual situation, I *can not help seeing* the object, as I saw it before the corrective investigation, then my perception—granting the above clauses about functioning sense-organs and distorting agencies—is veridical, and any so-called reason to the contrary is to be discarded as having fallen short of its explanatory purpose. If, after all is said and done, this "can not help perceiving" stands, the perception is veridical *in the aggressive sense* of requiring, say, the physiological dualist to amend, or repeal parts of, his epistemological constitution.

At this point the reader may raise the objection that my so-called methodological principle is really the expression of a preconceived and militant epistemological theory, namely, a kind of commonsense realism. Now I have nowhere denied that the observance of the new method might result in commonsense realism—whatever that may mean—and I confess that such a result would not make me unhappy, if I should be permitted first to define commonsense realism. But I do deny that the exhortation not to distort the field of perceptual experience is an explanation of the facts of perception. And it is this latter that I should take to be (part of) a theory of knowledge. Such an explanation might well, as we have seen, turn out to be some form of, say, constructionism, which is not what is generally understood by the term "commonsense realism."

Another objection before proceeding to the main point of this

² *Realism*, 1928.

essay. Granting that the C. P. is not an explanation of the facts of perception, i.e., a theory, can it properly be called even a method? A method is instrumental to the discovery of theories which do explain fact, but does our principle, conjoined with commonsense, possess any such efficacy? It seems rather to belong either as an unproved general assumption about fact at the beginning of a series of investigations, or as a conclusion about fact at the end of such a series. In either case it does not serve as a method. This objection is a serious one. A possible answer is that without tenaciously working with the C. P. as a fundamental assumption, an adequate explanation of perception and perceptible reality *might* remain undiscovered, hence the C. P. is, in this sense, a methodological instrument. As to its being a true or false description of perception and reality, not at all a method for the formulation of such descriptions, the answer is that just as, for example, the inductive method involves a kind of statement of fact, namely, the uniformity of nature, so too the new method involves an assumption about fact, an assumption expressed by the C. P. But these replies can not appear fair or reasonable without further comment, to follow below.

The C. P. has been referred to as a postulate. But the tenor of this exposition makes it clear that our postulate is not here considered as engendered in the frenzy of a mind intoxicated with the sense of its power to postulate anything it pleases. It is a postulate in the sense that a man might postulate that he is eating a turkey when he gets his teeth into one of its legs. And I have now reached the place to qualify an item of my above treatment of this matter. From the description hitherto given, it would seem that commonsense is *first* a theoretically innocent body of propositions, *then* a theory of fact after the C. P. has been introduced into it from the outside by arbitrary postulation. Now it is evident that, historically and biographically speaking, no such process occurs. It might be said with metaphorical truth that the C. P. is the very tissue of the organism's "perceptual sensibilities," from first to last. This is the widely-recognized (though poorly-named) "conceptual element" in commonsense and perception, and this fact constitutes the main point of the new epistemological method. In this sense, the C. P. is the datum of a kind of Brouwerian intuition, not itself a *mere* postulate which may be whistled in or out of existence according to the intellectual whim of the theorist. The principle may, of course, be *considered* false by the thinker, since after all it is a significant proposition, the denial of which does not yield an inadmissible contradiction. That is precisely why I have called it a postulate. Unlike most intuitionists, I do not claim infallibility for the principle, because I believe that data of intuition—in this case a theorized

datum, like most articulable data—are not self-evident in the sense of being necessarily true of fact. Hence the employment here of a postulational technique. But the sense in which “postulate” is a misnomer in this context must be admitted. In the first place, it is to be believed as true of fact, in order to generate the intellectual energy for the formulation of more adequate theories of perception and perceptible reality. In the second place, the claim is made that its truth is not constituted by being believed and acted upon, but that it is philosophically wholesome to believe it because it *is* true, or probably true, of things as they are.

The use of the term “probably true” brings out the fact that the C. P. is not exempt from verification, which raises the problem of how we are to demonstrate it. It seems to me that such demonstration must necessarily be indirect. The probability of the truth of the proposition, “What appears to be the case in veridical perception is really the case and perception is sometimes veridical,” would increase in proportion to the adequacy of a theory (theories) of perception which does not deny that proposition; and a theory of perception and perceptible reality is “adequate” if it reconciles what is scientifically known to be highly probable (space-time intervals, organic stimulation and response, etc.) with the apparent facts of perception as construed by the C. P. This is an important feature of the new method, and renders legitimate the following and concluding exhortation to epistemologists.

Dualist Lovejoy speaks of “a natural desire (on the part of Dualist Strong) to enjoy the pleasures of epistemological monism,”³ and he speaks with an unwitting force. When an epistemologist walks across a prairie in the gloaming, and sees pillars of pink cloud towering above the black horizon and listens to a chorus of crickets around him and smells sage in the gentle night-wind, he is filled—if he is still man alive—with a sense of the ineptitude and barren irrelevance of any theory of perception which corrupts the “above” and the “around” and the “in” of this perceptual situation by, for example, locating its “secondary” qualities in his private perceptual space and positing a physical space which contains physical cloud, cricket, and wind numerically distinct from many of their sensed qualities. And this sense of ineptitude is more acute when the adjective “physical” has—as it usually does—the connotation “real.” It is then that he longs for a theory which allows, without ignoring the truths of physics and metaphysics, for the reality of what he *can not help perceiving* as a healthy rational animal. I suggest that a failure to provide for the “pleasures of epistemologi-

³ This JOURNAL, “Dualism and the Paradox of Reference,” Vol. XXX (1933), p. 605.

cal monism" indicates a failure in critical thinking, and that the epistemologist who contents himself with a reiteration of long-respected reasons for dualism and with the statement that they disprove "primitive beliefs"⁴ for all time will in the end be the dupe of a longer-respected perceptible reality. It is highly probable that sentient organisms, equipped with the five or more sense-organs, have from the beginning of their history perceived—in a non-Pickwickian sense—white snow-topped mountains, blue oceans and rivers, brown deserts and red dawns, reverberating thunderstorms, savory meals, and chilly evenings. Such four-dimensional perceptual data remain, while theories of perception and meta-perceptual realities come and go depending on some particular ethos or social temper. However a man may conceive the world in an effort—and a laudable one—to discover its hidden nature and meaning, there lies before him, age after age, a very self-evidencing and homely reality. This middle-sized⁵ world of perception, thick and glistening with a significance to which every animal, rational or not, responds, is a world which theory had better not try to maul by violating the C. P. For in the end no theory can really maul or change the face of perceptible reality, as "cosmical" a "constant" (though in a different sense) as the astrophysicist may ever hope to find. The theory which gives recognition to this ancient beloved world by allowing it an ontological status and then proceeding to explain it without distortion will have a tremendous advantage. It will stand as long as that world lasts. Let me repeat, there are "natural desires" which ought not to go ungratified, for the significant reason that, where they are intellectual, the simple and yet often difficult gratification of them involves a discovery of truth. The gratification is indeed often difficult. But the difficulties encountered by a firm adherence to the C. P. are natural and honest as compared with the concocted difficulties which one encounters in maya and dualistic theories. The time will come when a perceptually gratifying theory of perception and reality will be formulated under the gaze of the investigator who has the passion, the patience, the discipline, and the wit to salute the many arguments for maya and dualistic theories, then to show how none of the true arguments conflict with commonsense. I appeal to epistemologists, with their fine analytical acumen, to come again under the spell of an irresistible appearance and to engage in a more concerted effort to show that it is reality. The success of this effort will indirectly increase the prob-

⁴ The usually cautious Broad becomes unusually incautious when he writes, "The primitive belief which accompanies all perceptual situations is *certainly* false to a very large extent; and there is not the faintest chance of rehabilitating it." *Mind and its Place in Nature*, p. 185. My italics.

⁵ For this phrase, see Reichenbach: *Atom and Cosmos*, p. 288 and *passim*.

ability of the C. P., and that is something all of us would *like* to see happen, for a very good *reason*.

The use of the term "gratification" in conjunction with "truth" savors of pragmatism. As a matter of fact, Dewey's denotative method is most like our new method among contemporary methods, because of its insistence that explanation must not lead away from or distort the fact which was initially the butt of curiosity. But such a method of denotation is not necessarily pragmatic, and the adoption of the new method does not require the investigator to explain everything from "the standpoint of the agent rather than that of the spectator." It requires only that what is intimately known in ordinary perception—active or contemplative—shall not suffer distortion when we attempt to answer questions about it.

In a sense, I have proposed nothing novel in these pages. Mankind began with the assumption of the C. P. When he took to reflecting on his experience and the nature of things, he discovered, it may be argued, the falsity of commonsense theorized by the principle. Hence its rejection. The reply is that I am indeed advocating a return to innocence or naïveté of a kind. But the whole point consists in the fact that it is a kind of innocence which man can not strip himself of without disembowelling himself, and an innocence which, like that of the babes and sucklings of the New Testament, is theoretically valuable. The analysis made in these pages, furthermore, obviates the criticism that in becoming commonsense philosophers we are "naïvely" uncritical and ignorant of assumptions, confused in our statements, and so forth. The new method and spirit of inquiry lies clearly defined before us.

There is a class of what I shall call "peripheral" commonsense propositions. Such are those which affirm that an unperceived fire, for example, is hot and colorful in straight-forward senses, or that a man's self is in the general spatio-temporal region of his organism. Since such are not strictly sense-perceptual propositions, though they lie very near that class, the new method prescribes or proscribes nothing with regard to them. However, the theorist who catches the spirit of the new method will be quicker to investigate sympathetically the claims of this class of peripheral commonsense propositions than to attend to the claims of their contradictories. . . .

I am looking through a window into my garden. By the window-sill is a flower-box containing geraniums. I see the red of one of these geraniums against the green of a pine about fifty feet beyond it. Between the indistinctly perceived brown horn of my spectacles and the green pine, I perceive this red geranium. Within the embrace of my vision lies a bit of the world I know and love, and the scene is beautiful. It is something into which I relax in contempla-

tion, even after reading the latest books on physics or epistemology. Now, the theory which would require me to believe that the real (physical) geranium is *nowhere* between the perceived green of the pine out there and the perceived brown of the horn-rims in here or that the red of the geranium is *nowhere* between real (physical) pine and spectacles, arguing either that the colors of real (physical) objects are not where these objects are or that such objects are veiled from sense-perception, such a theory, I say, presents me with a monstrosity as repulsive as a poorly-wrought painting which repels one by its ugliness, that is, into which one can not relax in contemplation. Such a theory provides one with the frame of a bed to lie on, but with spikes for mattress. The intellect can not find rest in such a theory, or, if it can, it has become as abnormal as the Hindu fakir who has learned to put up with a bed of spikes to demonstrate his endurance—and there are as many fakirs in the occident as in the orient. We epistemologists may have gone crazy in such fine concert and with such consistency that what is really our epistemological insanity looks like propriety and profundity to us. I wonder if a self-administered dose of the new (and very old?) epistemological method would not awaken us to some important realizations.

VIRGIL C. ALDRICH.

THE RICE INSTITUTE.

REPORT OF THE TENTH ANNUAL MEETING OF THE PACIFIC DIVISION OF THE AMERICAN PHILOSOPHICAL ASSOCIATION

THE tenth annual meeting of the Pacific Division of the American Philosophical Association was compacted into six hurried sessions, the first five at the University of California at Los Angeles and the last at the University of Southern California, stretching from noon of the 28th to noon of the 30th of December, and concluding barely in time to escape the worst deluge of Jupiter Pluvius in recorded history of this region. Some of the papers were inordinately long, two running over fifty minutes. In the last session there was practically no time for discussion, so late was the starting. Members I questioned agreed that in future the twenty-minute rule as to papers should be rigidly enforced, there should be fewer papers, more time for discussion, and one afternoon or evening should be left free for informal visits and rest. On the whole the papers were deserving of attention and the discussion apposite. Nor were persiflage, blandishments discriminate and indiscriminate, and aspersion lacking. With infrequent interruptions epistemology and metaphysics kept the center of the stage.

An exception, however, was the opening paper by Mr. E. A. Robinson on "A Wish Theory of Art." Esthetic experience was represented as essentially the satisfaction of four fundamental wishes, for security, recognition, novelty, and response. Miss Kate Gordon did not find these wishes descriptive of her esthetic moments and suspected a revival of faculty psychology. She found the emotional quality of artistic experience in its capacity for stirring and multiplying, rather than allaying, wishes; esthetic values being those to which we are devoted without possibility of a substitute. Mr. Tufts queried whether the paper had provided for the formal characteristic of art, that of pattern, rhythm, symmetry. No one, save privately, raised the obvious question as to why the sex urge had been omitted.

Mr. P. A. Schilpp offered a vigorous "Critique of Schlick's Claims to Standpointlessness," and precipitated the familiar dispute over the status of the given in relation to mind. He denied that the irreducible character of the given is an unquestionable datum, for meaningful questions about it can be asked, and criticisms and criteria can be assigned as to its possibility. Furthermore, how do we know that words apply to it? How can we think it? Schlick, he averred, contradicts himself in admitting that the given is relational and lawful, for such canons can be supplied only by thought. Mr. D. S. Mackay admitted that there are metaphysical assumptions in Schlick's position, but protested that much of the criticism disregarded the variable status of the given: what in one context is unassailable can rightly be questioned in another. Seconding Mackay, Mr. Rynin insisted that the paper had confused Schlick's concepts of philosophy and science, the clarification of propositions and the propositions themselves, which are statements of fact. To Mr. Alexander's contention that scientific laws are statistical generalizations and not statements of the given, Mr. Rynin replied patly by asking what makes these laws true if not experience given, which by the way is not atomic in its structure. Philosophy and science seemed to be in the same category, to Mr. Hugh Miller, both coming back to a situation we can point to and do not make. Mr. William Savery found Schlick's terminology very bad, for, as there are different kinds of meaninglessness, there are different kinds of meanings of meaninglessness; one kind of truth is verification, another non-contradiction; all falsity ultimately is inconsistency. Mr. D. A. Piatt expressed his wonderment and disappointment that philosophers should be bogged in this controversy practically where they were ten or fifteen years ago, and Mr. Schilpp appropriately saw no one bogged but Piatt.

The two papers and the discussion of the evening luxuriated

in tragedy, rhapsody, satire, comedy, cold relentless logic—everything. In Platonic vein, poetic, dramatic, cosmic, Mr. H. B. Alexander discoursed on the five “Worlds in which we Participate”—the Physical, the Mathematical, the Sensible, the Esthetic, and the Ethical. Inspiring to pathos was his word-picture of the partial, overlapping, incomplete, imperfect nature of each of these worlds, though a grandeur, in which they participated, was not denied them. As Mr. E. W. Strong remarked, the plurality of these worlds seemed to mask a hierarchy and a super-world or God, a medieval schema; and Mr. Alexander frankly answered that he recognized the reality of other worlds, of angels, of devils, but that these required another paper. Like Strong, Mr. Hugh Miller objected to the hypostatization of these realms, attributing the plurality to our experience and to the patterns, physical, biological, and social in which the one world is ordered.

“Concatenism” (moderate pluralism), which he found suggested but not logically developed in James, Peirce, and Bertrand Russell, and the most important philosophical idea of the past fifty years, Mr. Savery developed and defended as the most probable theory of the number of beings (not kinds of beings). It is impossible to give an intelligible summary here of his terse, precise, and extraordinarily complete analysis. Eliminating extreme monism which affirms an all-inclusive being, as inconsistent with the qualities, relations, and external relations of indubitable experience, he then eliminated extreme pluralism in its two forms of monadism, and mixed concatenism and monadism. Both forms require a harmony between the monads which is either inconsistent or improbable according as it is pre-established or accidental; and if not requiring harmony, they are an imaginary conception of island universes which we can not know. Concrete (moderate) monism, which admits external relations between parts of an inclusive whole, is possible but improbable, for it gratuitously assumes the reality of the chain above that of the individual links and of their overlapping. Concatenism allows for entities related to some other entities, but not to all. In the discussion Mr. D. C. Williams titillated his listeners by declaring for “someness” in the world and by expressing admiration for the way in which the tables had been turned on “whole-hog philosophies”; he approved “of fighting the devil with fire,” the devil being the extremes of monism and pluralism. It seemed possible to him, however, that links might be included in links, and it seemed strange that a philosophy renouncing mechanism should smack of atomism. Savery’s reply acknowledged gratefully the last criticism, admitting that he had overlooked the inconsistency between the separate links and the

emergent properties of wholes. Commenting on the two papers, Mr. J. Loewenberg slyly invited both readers to compliment each other for saying in contrasting language the same thing. Mr. Alexander promptly expressed delight with Savery's paper, and the latter, cornered, praised the language of Alexander's paper but suspected latent differences. Impatient with the "love feast," Mr. W. H. Long cudgeled the critique of monism, demanding of Mr. Savery why Occam's Razor should be extended to philosophy and be accepted as decisive in the absence of positive evidence.

Friday morning's so-called symposium on "Mind, an Event in Physical Nature," the title of Mr. H. C. Brown's presidential address of the previous year, was not a symposium and was not up to standard. There had been no exchange of papers, there was the utmost topical diversity, very little profound criticism, too much criticism disinterested; one paper didn't show up, another was substituted for it but wide of the topic, and another expressly written for the symposium was scheduled for and given Saturday. The substitute paper by Mr. V. F. Lenzen, "The Existence of the Physical World" rejected his former view of the physical object as a class of aspects actual or possible, by virtue of the discrepancy between aspect and its cause; and rejected the subjectivist view which makes experience alone real and causal objects convenient fictions, because we are compelled to believe that data in some form exist when not experienced. He adopted the remaining alternative of dualistic realism, making the physical object the temporally prior cause of sense-data. More pertinent to the symposium was Mr. Williams' "Physical Location of the Cognitive Datum." With courage and despatch, Mr. Williams defended epistemological monism against stock criticisms, maintaining first: that error is possible because conscious givenness is quite different from knownness; secondly, that the objection of temporal displacement erroneously supposes that what is experienced as co-present must be physically simultaneous; and lastly, the objection of spatial displacement repeats the fundamental mistake of supposing that the datum must transparently reveal its location. Combatting an old disease with old and tried remedies, notably with Berkeley's arguments, Mr. Long fought "The Recrudescence of *Physis*." Philosophic dignity seemed to him imperiled by materialism, and he lamented Brown's dependence upon naïve western thought and recent physics, which latter presents a better face as metaphor than as dogma. Hadn't Berkeley adequately proved, that perception can give no clew to what extended things are in themselves, and what comfort is there in relying upon a *physis* that is unknowable? Mr. Savery gave an encomium of Brown worthy of being preserved for his epitaph.

Savery's paper came as a bombshell to the less favored, listing the four characteristics of an intelligent contemporary philosopher, all four of which he ascribed to Brown. He must accept current scientific method, reject conjectures and irrelevancies, believe in naturalism, and adopt emergence (for a stream *can* rise higher than its source).

Mr. Brown expressed general sympathy with Lenzen's paper, differing chiefly on the status of qualities; was grateful for Williams' support, coming independently and in different language, and was especially pleased to have Williams impute to him a "James-Lange theory of knowledge." Brown thought "materialism" a more honest term than "naturalism," but was disposed to let Savery have his way about names. He didn't see why it is doubtful to Savery that visual and tactual space are outside us, though he suspected a difference in the meaning of their terms. Answering Long, he found nothing more dignified than seeking truth, denied that he was wishfully thinking, found it not prejudicial to values that they are concomitants of physiological states, and preferred a "gutter ontology" to unverifiable experiences. The general discussion of the symposium which followed, while spirited and diverting, was tangential, focusing of course upon Mr. Savery, and my brief space forbids that I immortalize it, in print, save for Mr. Alexander's remark that he goes down into his Platonic tomb with implicit faith in his resurrection.

In the first of the two Friday afternoon papers, Mr. Tufts brought philosophy back to earth by assessing the present status of "Equality as a Moral Value." Mill's hope for justice as the essential virtue, based on equality and sympathetic treatment, was shown to have fared pretty well in the political treatment of women, precariously in economic activities, not so well as we might expect in the influence of science, and was shown to be in danger in education. Greater equality seems to be indicated in the demand of personality for self-respect and consequent respect for others, in the exigencies of increasing social complexity, and in the recognition of the right of collective bargaining. Science has not shown in inequalities of intelligence that one kind of man is a better citizen than another. A thoughtful discussion greeted the paper, Mr. E. E. Ericksen questioning whether equality is not more an instrument than an end, whether Plato was not right in defining justice as each keeping his place, and whether science is not compelling more recognition of inequalities. Mr. Jeffery Smith was of like mind, suspecting that justice and social equilibrium demand inequality and concentration of power and the submission of the masses. Agreeing with Plato that justice is that which brings about

the greatest good, Mr. Savery found the democratic, hedonistic theory of Epicurus and Jesus the correct alternative as to the nature of the good. Russia, he pointed out, has reversed our practice of using nominal political equality to achieve predatory inequality. Mr. Mackay and Miss Georgiana Melvin found a paradox in that as we secure certain equalities among individuals we bring about other inequalities between groups, e.g., between trade unions and between large and small nations. Mr. Alexander was impressed with Bergson's statement that it was left to America to make the greatest contribution to the ideal of justice, to conceive justice in a Christian manner, as giving to each according to his needs.

Luminously and minutely Mr. Loewenberg portrayed "The Comedy of Immediacy in Hegel's *Phenomenology*," as a comedy of errors in impersonating incongruities. Hegel's method was dual: histrionic in simulating unreflective consciousness, as it is for itself; comic in the shift in standpoint from actor to spectator. The fatal flaw in the dialectic is the unauthenticity of feigned immediacy, the pretense of describing the indescribable. The dialectic testifies not to the character of sense experience nor to that of any other "moment," but rather to the creative imagination of Hegel. Defending Hegel, Mr. E. W. Hall saw the source of the dialectic primarily in the inadequacy of any moment, not simply in the alternation of standpoints, and perhaps Hegel meant that all relations are internal, hence that sense experience is internally incomplete. Mr. Hall had difficulty in reconciling Hegel's philosophy of history with Loewenberg's belief that the dialectic was not genetic but logical. To Mr. Jeffery Smith, the Hegelian paradox appeared a genuine aspect of nature, illustrated in the worlds which Alexander had pictured as autonomous, yet related; in the twilight zone between immediacy and linguistic of Wittgenstein, between immediacy and the *a priori* of C. I. Lewis. The discussion was halted in mid-career, to give time for tea, after Mr. Savery felicitously extended the comedy, finding it not in the fact that Hegel was an actor, but rather in that his acting was so bad; and the real laugh was Loewenberg's in seeing the bad acting, though owing to the length of the paper Savery marveled that Loewenberg could keep on laughing all the way.

After a refreshing pause during which we were motored to the beckoning hills and the home of Mr. Rieber and enjoyed his genial hospitality, we returned for the annual dinner and presidential address. If there still be magic in names, Mr. Boodin's "Functional Realism" is happily coined, and it bodes no good to the two realisms, direct and dualistic, now lapped in complacency. Excoriating a "naïve" realism that isn't naïve and a "critical" one

that isn't critical, Mr. Boodin exposed their common atomism to the fire of field-physics, and the deadliness and range of his fire and the magnitude of his weapons make "functional realism" a thing to be reckoned with. A lively symposium is guaranteed for next year's meeting. Developing the implications of Newton's discovery that weight requires at least two atoms, he explained that things and qualities exist only in fields, that properties are vector relations of energy-fields and of perspectives that are integral to nature. Things are what they do, electrons are known as they act in affecting radiation, nature knows no distinction between active and passive. Perspectives he distinguished into actual and possible, primary and secondary. The primary ones are perceptual and the secondary judgmental, but the distinction is made, not ready-made, in experience—things being interpretations of the action of nature. Likewise distinctions in qualities are valuational, not original. But most interesting and crucial was the assertion of basic confusion in orthodox realism between qualities, which properly are nature as actualized, and causal conditions, which are legitimized under borrowed credentials in the control of experience. This confusion is betrayed in critical realism in the appeal to angels for certification of "real qualities" of objects, and in neo-realism in the belief that qualities exist apart from perception. In the matter of time he dispensed with James's "specious present" in favor of a given field of qualitative transformation, placing the differentiation of past, present, and future in secondary perspectives; and Whitehead's "eternal objects" he disposed of as quite mortal, being invented to account for the constancy of sense qualities. But it was in answer to our greatest problem, how we can be now acquainted with a nature that is behind us in time, that his argument rose to its full height. With painstaking illustration he explained the principle of "cosmic immanence" in the physics of electrons immanent as waves in different orbits, in the biology (*à la* Haldane) of breathing, and in the neurology (*à la* Head) of the brain, which has been shown to act as a field or unit. Verily the revolt against dualism is here, defiant. For the remainder, relativity got its due share of attention, under the ægis of objectivity and the support of Weyl's principle of cosmic structure. Subjective relativity too was championed and lifted from opprobrium in the recognition that mind must have structure and forms else we could not know structure in nature, and Kant was hence partly right. In fitting climax beauty and truth were restored to nature, leaving subjectivism nought but shadow.

Saturday morning, after shifting our domicile to the University of Southern California and transacting the annual business, which

put Mr. Tufts, as the new president, in the chair, we went into a final abbreviated huddle. Mr. Hall ably defended the essential identity between "Thought and Analysis," affirming the priority and continuity of the perceptual datum as essential to veridical knowledge, and denying any place to synthesis, re-synthesis, or construction in the work of thought. The simplicity which arrests analysis was said to be a matter of irrelevant complexity, and analysis was classified as simple, essential, adequate, and absolutely complete. Corroborating the earlier outburst by Piatt, Mr. Strong cited this paper and the papers generally as indication that we are concerned, or should be, with the clarification of meanings and not primarily with truth or falsity. Thus he found little to debate in Hall's thesis as he came to understand his use of terms. That thesis loses its sting when it is allowed that we don't comprehend the datum in a first glance. Here Mr. Strong found Loewenberg's distinction between pre-analytic and post-analytic data helpful.

Mr. H. L. Searles reopened the subject of the symposium in "The New Materialism—A Critique." His criticisms were classified as metaphysical, epistemological, psychological, and valuational. Perhaps best was his charge that Mr. Brown had only verbally succeeded in identifying adjectival qualities with physical substance, and had sacrificed the known field of mind to the conjectural causal conditions in matter. Atomic physics seemed to Searles discredited for philosophic use by the notoriously diverse deductions drawn from it. On the epistemological side moderate mentalism was defended, with confirmation from arguments of Lovejoy and Schiller, and truth and error were taken as presupposing mind as subject. In the psychological critique stress was laid on the failure to show cerebral localization of mental functions. Valuations were said to be as dependent upon moral, religious, and esthetic feelings as upon physiological conditions, and the latter mark simply our "*gastro-centric predicament*." In comment on the paper, Mr. Piatt had time only to suggest that some of the criticisms were based on a possible misunderstanding of Brown's position, due to the latter's confusion between the qualitative and causal reading of *physis*.

Mr. E. D. Starbuck, speaking of "The Self and its Objects in Racial Cultures" pointed to the Self, Society, and the Cosmos as three factors or movements in every cultural form, and showed how emphasis on any two of these factors with relative neglect of the third was responsible for the characteristic quality of certain historic cultures. The closing remarks by Mr. Miller welcomed the analysis as evidence of contemporary progress in philosophy toward attention to living and social patterns in place of exclusive physical interest, and suggested that since the self was defined in part by its

relation to Society and Cosmos, the first term of the triad needed further analysis.

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BOOK REVIEWS

Précis d'Histoire de la Philosophie Moderne. Tome Premier: De la Renaissance à Kant. JOSEPH MARÉCHAL, S. J. (Museum Les-sianum, Section Philosophique, No. 16.) Louvain: Museum Les-sianum. 1933. 307 pp. 28 frs.

If completed (for the appearance of later volumes is to depend on the reception of the present volume), Père Maréchal's *Epitome of the History of Modern Philosophy* will comprise three parts: the first, From the Renaissance to Kant; the second, The Era of Critical Idealism; the third, Contemporary Philosophy. Volume I of the work, which is a résumé of the course given by the author at Louvain in preparation for the *License en Philosophie*, extends from Nicholas of Cusa to Newton (Hume and Condillac being reserved for the second volume). The evolution of thought during the three hundred intervening years is traced as the actualization of "the logical alternatives set, toward the end of the Middle Ages, by triumphant Nominalism" (p. 275). After the Renaissance, which is sketched briefly in Book I, two lines of développement were possible—the ontologist (Descartes, Pascal, Malebranche, Spinoza, Leibniz, Wolff) and the empiricist (Bacon, Hobbes, Locke, Berkeley, Newton). Père Maréchal's treatment of these currents has much to recommend it. He places his chief emphasis on the treatment of a few great philosophers (thus 100 of the 280 pages of text are devoted to Spinoza and Leibniz), yet he finds place in his numbered paragraphs to mention, characterize, and group the numerous writers who, though less well known, were influential or symptomatic in the currents he is tracing. His bibliographies are frequent and well-chosen, and his interpretation is supported amply by *textes justificatifs*. The interpretations, finally, notwithstanding their necessary brevity, are clear and informative beyond the scope of what is usually thought appropriate to a text-book. They follow in the main the line of thought (described adequately, perhaps, as Thomist) which Père Maréchal has expressed in his *Le Point de Départ de la Métaphysique*. The arguments and reasons on which the history is grounded are stated briefly in the present work, and moreover the authority is usually given, and examined, for the statements of fact that might be challenged, such as are always frequent in text-books.

Students—or teachers—of the history of philosophy who become acquainted with and understand the contents of the book should have an unusually good knowledge of the philosophy of the period it covers.

R. McK.

Leben und Erkennen. GUSTAV WOLFF. Munich: Ernst Reinhardt. 1933. 442 pp. 11.50 M.

The American student has available to his use in English a considerable number of recent books on philosophical biology. In addition to general books, such as Thomson and Geddes, or Bavink, or the revised third edition of Newman's *Evolution, Genetics and Eugenics*, and Singer's admirable general history of biology (American edition title: *Story of Living Things*), there are more or less popular works on the mechanism of evolution, heredity, and the vitalist controversy, by J. B. S. Haldane, T. H. Morgan, H. S. Jennings (*Biological Basis of Human Nature*), as well as by Woodger, Bertalanffy, and C. C. Hurst, and Homer Smith's little *Kamongo*. The work before us is rather different from any of these, though belonging to the vitalist group, and particularly to that vitalism which attacks the adequacy of Darwinism, and holds that physical laws are not so much broken in the biological realm, as they are necessary but not sufficient to the determination of the teleological behavior of biological wholes. The author is Professor of Theoretical Biology at Basle, and writes in a pleasant tone, with even an occasional touch of humor. But though he subtitles his work, "Studies preliminary to a biological philosophy," he is less interested in writing a philosophy of biology than in giving a biologist's impressions of the general problems of philosophy: knowledge-theory, "teleology" in the Kantian philosophy, value-theory, freedom. The result of this spread is some lack of depth, so that the American reader will probably get more out of a selection from the other books we have named.

H. T. C.

L'Individualité. MAURICE CAULLERY, C. BOUGLÉ, PIERRE JANET, J. PIAGET, AND LUCIEN FEBVRE. Paris: Félix Alcan. 1933. 156 pp. 15 francs.

This little volume contains five papers and extended discussion heard during the "Troisième semaine internationale de synthèse" in 1931. The papers approach the problem of individuality from the points of view of biology, psychology, sociology, biography, and history. They as well as the discussions are always illuminating and actually succeed in organizing—if not in synthesizing—the

opinions of the scholars participating. The outline of this organization, too long to quote, is given in the final chapter to the volume. The value of the papers and the discussions which took place after their delivery is perhaps not so much the conclusions reached as the analysis of the problem.

G. B.

The Nature of Religion. GREG WOBBERMIN. New York: Thomas Y. Crowell Co. 1933. xvi + 379 pp. \$3.50.

The author is Professor of Systematic Theology in Göttingen, and his book has been translated by Theophil Menzel and Daniel Sommer Robinson, with a brief introduction by Douglas C. Macintosh of the Yale Divinity School.

The book falls into two parts, entitled respectively, "The Question of the Nature of Religion without Reference to the Question of its Truth," and "The Question of the Truth of Religion in the Light of the Question of its Nature." In the first part, the author, under the inspiration of Schleiermacher, applies the religio-psychological method in studying the varieties of religious experience, and reveals himself both as an unusually unprejudiced interpreter and as master of an encyclopedic mass of source material. While insisting on religious experience as the proper starting point for all scientific investigation into the nature of religion, and also emphasizing the prime importance of feeling, Professor Wobbermin maintains that religion always involves an objective over-world and is therefore necessarily interested in truth. The second part of the book is accordingly devoted to an examination of this question of truth. While mythological and illusionistic explanations are rejected, a distinction is made between knowledge and belief on the ground that the latter is not a stage of knowledge, but rests on a volitional and instinctive element; and it is suggested that belief and knowledge must be brought into a unity in a philosophy of life. Here the work seems too concise.

The book is noteworthy for its rigorous determination of method, its wealth of material, and its penetrating criticisms of opposing theories.

R. S.

L'Émotion. RENÉE DÉJEAN. Paris: Félix Alcan. 1933. viii + 261 pp. 35 francs.

Emotional disturbances are possible only when we are fully awake and aware of our world; and yet they are disturbances, they disrupt and destroy our orientation towards the real. This "paradox of emotion," as the author calls it, presents an insoluble prob-

lem, he believes, for reasons set forth at length in this monograph, to all views of the mind-body relationship save his own "realistic dualism." Dr. Déjean showed himself a thorough dualist in his *La Perception Visuelle*, published in 1926, in which he argued for the "equal objectivity" of both the mental and physical factors involved. Emotion he also treats as neither purely intellectual nor purely physiological, but a "psycho-physiological phenomenon, a psycho-organic interaction" which has a psychological origin and physiological consequences. But neither parallelism nor any form of monism, argues Dr. Déjean, can explain the fact that during emotional states the nervous system is "no longer at the disposition of the mind." Only a frank interactionism based upon observation rather than upon metaphysical prejudgments will help us to understand the paradox. Dr. Déjean's descriptive material is rich in references to clinical cases, many derived from war experiences; but it is not always easy to tell exactly where his own contributions enter. This book lacks the excellent bibliography which accompanied his earlier volume.

H. A. L.

Republican Religion: The American Revolution and the Cult of Reason. G. ADOLF KOCH. New York: Henry Holt and Company. 1933. xvi + 334 pp.

At a time when many scholars such as Professor Beard and the late Professor Parrington have tended to explain American developments in terms of economic determinism and to belittle religious factors, it is a pleasure to find that these factors are to be subjected to scholarly investigation in "The American Religion Series," of which *Republican Religion* by Mr. G. Adolf Koch is the seventh volume. With the exception of Professor I. W. Riley's incisive but somewhat jaunty *American Philosophy, The Early Schools* (New York, 1907), little has been done in a scholarly and objective way on American deism, the religion which in part conditioned the growth of our national ideals from 1775 to 1810. Mr. Koch devotes the body of his book to eight largely biographical chapters in which he discusses Ethan Allen; Elihu Palmer; his attempts with others to organize a deistic church and a deistic journal, *The Temple of Reason*; the Society of Ancient Druids, related to Freemasonry and sun-worship; other prophets such as Thomas Paine after his return from Paris in 1802, Kirkbride, John Foster, and the "Walking" Stewart; the "twilight" of deism as represented in the journal, *The Theophilanthropist* (1810-1811), with its articles reprinted from earlier thinkers; respectable deists looking toward Unitarianism such as Gay, Chauncy, Mayhew, Freeman, Bentley, and Priest-

ley; and the triumph of fidelity which followed the excesses of the French Reign of Terror, the tyranny of Napoleon, the distrust of French morality, the friction arising from the X. Y. Z. papers, and the crusading of emotional Methodist and Baptist evangelists and revivalists in America. The volume is carefully documented (there are about seven hundred and fifty footnotes) and there is an admirable bibliography of twenty-nine pages. The style is pleasing, and a subject which has usually provoked heated partisanship is approached in a spirit of fairness and objectivity. The volume is a most welcome addition to our knowledge of this neglected subject, and it offers a vast body of facts about a host of obscure figures. No serious student interested in the political, religious, social, or literary life of this crucial period can afford to ignore this valuable book based on laborious research.

If such are the merits of Mr. Koch's work, what can be said of its shortcomings? These seem to be of a negative rather than of a positive sort, and therefore less serious. He has done well what he has tried to do, and what the book lacks can perhaps be supplied in part by other scholars. The treatment strikes one as being somewhat provincial, as lacking perspective, as indicating an imperfect power of seeing the American ideas discussed with steady and organic reference to the European pattern of ideas extending back to the Enlightenment, to Herbert of Cherbury, who is the "father" of the ideas under consideration. One wishes Mr. Koch had made more use of the researches of eminent authorities on the history of radical thought such as Brevold, Ronald Crane, Lovejoy, C. A. Moore, and Carl Becker, not to mention J. M. Robertson, Leslie Stephen, A. S. Farrar, Lechler, and Noack, as well as specialists on French thought such as Mornet, Cestre, Faÿ, Morley, Lanson, Chinard, Torrey, Mathiez, Babbitt, H. M. Jones, and others. Again, one wishes that Mr. Koch had not slighted the outstanding figures whose deism strongly conditioned their effective efforts in shaping the new nation and her ideals; I refer to Franklin, Jefferson, Paine, Barlow, and Freneau. Possibly the fact that Mr. Koch admits he chose to slight these men is not unrelated to an inadequate mastery of the comparative-literature approach, for since all of the first four played important parts in France and were steeped in French thought, their treatment would have necessitated more consideration of the backgrounds of French liberalism as represented by Voltaire, Rousseau, Helvétius, Raynal, Turgot, and Condorcet. While one is grateful for the mass of information about *obscure* figures, he is likely to feel as if Hamlet were left out of the play. Finally, able as is Mr. Koch's treatment of ideas exclusively religious from a biographical approach, many readers will doubtless wish that he had

been more interested in an incisive analysis of the precise manner in which these religious ideas motivated current ideas of a political, social, humanitarian, economic, educational, and literary variety. One wishes more attention had been devoted to the *inter-relations* of these ideas, *genetically* considered. For example, to what extent did the deistic faith that men are naturally "good and great, benign and just" lead to the disparagement of a coercive government and to a faith in altruistic democracy? To what extent did the deistic faith that the "most acceptable worship of God is service to man" lead to humanitarian aids toward social welfare? To what extent did the deistic faith that the study of the laws of nature through science "is the true theology" and the hope to "make learning consist . . . in scientific knowledge only," help to shift the stress from literature to science in education? To what extent did the deistic faith that in the light of a harmonious Newtonianism "self-love and social are . . . the same" motivate a complacent faith in economic *laissez-faire*? (See, for example, O. H. Taylor's "Economics and the Idea of Natural Law," *Quarterly Journal of Economics*, XLIV, 1929, 1-39, and J. Viner's "Adam Smith and *Laissez-faire*," *Journal of Political Economy*, XXXV, 1927, 198-232.) And finally, to what extent did the deistic faith that nature rather than a book is a divine revelation, that "all that we see" is "Nature's God," lead to concrete observation, to vivid imagery in writing, and so to a superior esthetic quality in poetry? ¹ For unless this subject is seen as an *organic whole*, unless religious ideas are followed out as they affected the whole cycle of an author's interests, the reader is apt to get the impression that the discussion is after all somewhat lacking in concrete significance. Of course, whoever attempts to answer the questions I have suggested will find much help in this volume and may I repeat that hereafter all scholars in this field must be deeply indebted to Mr. Koch for doing carefully and thoroughly what he set out to do. Not until our somewhat artificial and narrow departmentalization of knowledge is modified in our universities can we hope to develop fully scholars who can bring to the test of fact for a whole period the difficult and comprehensive hypotheses here suggested. The shortcoming in this respect is not so much that of Mr. Koch as of an academic system in which professors of religion, of political theory, of sociology, of economics, of education, and of literature seldom

¹ The reviewer has made an attempt to consider some of the hypotheses suggested as to the relationships of these ideas with reference to *individuals* in his Introduction to *Poems of Freneau*, New York, 1928, in a paper "Toward a Reinterpretation of Thomas Paine," *American Literature*, V, May, 1933, 133-145, and in one on "An Historical Interpretation of Thomas Paine's Religion," *University of California Chronicle*, XXXV, Jan. 1933, 56-87.

have a thorough knowledge of what is being done by their brothers in parallel fields.

HARRY HAYDEN CLARK.

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La Philosophie de Newman. Essai sur l'Idée de Développement.
JEAN GUITTON. Paris: Boivin et Cie. 1933. Pp. xli + 243.

Among the works of Cardinal Newman, there are two in particular, besides the immortal *Apologia*, which have attracted the interest of philosophers: the *Grammar of Assent*, which contains his epistemology, and the *Essay on the Development of Christian Doctrine*, which contains his philosophy of history. The present admirable study, by a French Catholic *agrégé de philosophie* and *Docteur ès lettres*, devotes itself primarily to the latter work, which it treats as the chief source for Newman's whole philosophy; but in the endeavor to explain the significance of this crowning achievement of his thought, it reviews his life and other works with much learning and much literary skill.

The upshot of the study can be stated very briefly. Newman is often treated by non-Catholics as an interesting demi-heretic, whose idea of "development" paved the way for the innovations of the Catholic Modernists. This, thinks Guitton, is a great mistake. "Development," in Newman, means the opposite of innovation. His whole theory of development was worked out, as an interesting manuscript letter cited in an Appendix makes clear, with the object of proving that the apparent innovations in Christian doctrine are only the means by which one and the same body of divine truth managed to preserve its vital identity unimpaired while passing through various temporal emergencies. "It changes with them in order to remain the same" (p. 174). When any two Fathers of the Church, such as St. Justin and St. Athanasius, appear to contradict each other, it is because, in Newman's own words,

St. Athanasius [the later of the two] considered the doctrine in all its aspects, St. Justin in one only: and that partial truth sounds like error. Both fathers saw before them, by the eye of faith, one and the same Object: but St. Justin, insisting on one portion of it, seemed to deny the others, though, had his meaning been asked, he would have explained himself in St. Athanasius's sense, nay would have confessed that he had spoken unguardedly. [Pp. 188, 190.]

Guitton is quite plainly in the right, then, when he denies that Newman's idea of "development" is to be put in the same category with Spencerian "evolution" or Hegelian "becoming." Spencer derived his fundamental concept from mechanics; Hegel derived his from logic; Newman derived his from the moral life, where the

paradox of vital identity, persisting through a long series of adaptive changes, is most familiar. Newman, in short, was a thorough-going Roman Catholic. If it seem incredible that so gifted and intelligent a man should have occupied that position, and accepted all its consequences, the temptation is to make out that, somehow, he was not an orthodox Roman Catholic. The truth is, he was as orthodox as he knew how to be, and must be treated as such.

The bibliography is exceptionally full, and should be of use to all students of Newman's life and thought.

WALTER M. HORTON.

OBERLIN COLLEGE.

Cardinal Newman and William Froude, F.R.S. A Correspondence.

GORDON HUNTINGTON HARPER. Baltimore: Johns Hopkins Press. 1933. viii + 211 pp. \$2.00.

This correspondence between the years 1844 and 1879 consists largely of hitherto unpublished letters and constitutes a valuable commentary on the troubled state of Newman's mind during these years. It supplements particularly the *Apologia* and the *Grammar of Assent*. Froude's criticisms of Newman's position are also of intrinsic philosophical interest. Mr. Harper has contributed an admirable Introduction and a running commentary that makes of the correspondence a connected history.

H. W. S.

JOURNALS AND NEW BOOKS

REVUE DE MÉTAPHYSIQUE ET DE MORALE. 41^e Année, No. 1. "La "Mort de l'Art" dans le système hegelien: B. Croce. La méthode scientifique en morale et en psychologie suivant l'œuvre de Frédéric Rauh: E. Forti. Le libre arbitre et l'attention selon Saint Thomas (suite et fin): J. Laporte. La détermination du fait primitif (suite et fin): J. Nogué. Sur l'interprétation concrète de la mécanique quantique: C. Bialobrzeski. Le pragmatisme conceptuel de Clarence Irving Lewis: P. Devaux. L'objection de conscience: R. Aron.

REVUE PHILOSOPHIQUE. 59^e Année, Nos. 1 et 2. Le symbolisme dans la langue: G. Dumas. Le monde vivant sans hérédité: E. Rabaud. Réflexions sur "Les deux sources de la morale et de la religion": A. et Y.-D. Miroglio. Les fondements et l'évolution du droit d'après Emmanuel Lévy: G. Gurvitch.

REVUE DES SCIENCES PHILOSOPHIQUES ET THÉOLOGIQUES. Vol. XXII, No. 3. Analyse de l'être mathématique: L.-B. Guérard des Lauriers. Y eut-il un second schisme de Photius: V. Grumel. (No. 4.) Analyse de l'être mathématique: L.-B. Guérard des Lauriers. Réflexions sur la théologie du péché: Th. Deman.

ARCHIVES DE PHILOSOPHIE. Volume X, Cahier III. Méthodologie Scientifique. Méthodologie Dynamique interne. J. DE LA VAISSIÈRE, S.J. Paris: Gabriel Beauchesne et ses Fils. 1933. 109 pp.

SOPHIA. Anno I, N. 3-4. La filosofia di Bernardino Varisco: *Giulio Alliney*. Sulla logica della logica secondo Emilio Lask: *Annibale Pastore*. La critica di Antonio Rosmini alla filosofia tedesca postkantiana: *Erminio Troilo*. La lettera di Giordano Bruno al Vicecancelliere dell'Università di Oxford: *Ludovico Limentani*. Il realismo metafisico di Vincenzo Gioberti: *Roberto Pavese*. Il conoscere scientifico e il problema della sua validità: *Ugo Redano*. L'antinomia dell'estetica platonica: *G. Flores D'Arcais*. Il problema religioso in Blondel: *Michele Giorgiantonio*. Il pensiero filosofico nel "De Trinitate" di S. Agostino: *Primo Montanari*. Dialettici e antidialettici nei secoli IX, X e XI: *Michele Losacco*. Autore Schopenhauer e la mistica: *Giuseppe Faggin*.

Piéron, Henri: L'Année Psychologique. Trente-Troisième Année, (1932). Paris: Félix Alcan. 2 vols. xxx + 950 pp. 120 fr.

NOTES AND NEWS

There was organized last year in Michigan a philosophical association, known as the Philosophy Section of the Michigan Academy of Sciences, Arts, and Letters. The first annual meeting will be held on Saturday, March 17, 1934, at the University of Michigan. The program is as follows:

The Unsubstantiality of Matter *DeWitt H. Parker*
Critical Comments on the Unsubstantiality of Matter. *Roy Wood Sellars*

The Question of Authority in Morals *John M. Wells*
Some Permanent Contributions of Aurelius Augustine. *Walter Van Saun*

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Value Theory and Criticism by Orlie Pell. 81 pp. 75 cents.

Realistic Ethics by Annette T. Rubinstein. 137 pp. \$1.50.

IN PRESS

Studies in the History of Ideas. Vol. III. Edited by the Department of Philosophy of Columbia University. (Columbia University Press.) 500 pp. \$3.50. Contents: John Dewey: *An Empirical Survey of Empiricisms*; M. T. McClure: *Greek Genius and Race Mixture*; Richard McKeon: *Renaissance and Method in Philosophy*; A. G. A. Balz: *Cartesian Doctrine and the Animal Soul*; S. P. Lamprecht: *The Role of Descartes in Seventeenth Century England*; F. J. E. Woodbridge: *Locke's Essay*; Howard Selsam: *Spinoza; Art and the Geometric Method*; J. T. Baker: *The Emergence of Space and Time in English Philosophy*; Rudolf Kagey: *Coleridge*; Sidney Hook: *Hegel and Marx*; H. W. Schneider: *Mill's Methods and Formal Logic*; Ernest Nagel: *Impossible Numbers; a Chapter in the History of Modern Logic*; Gail Kennedy: *The Pragmatic Naturalism of Chauncey Wright*.

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THE JOURNAL OF PHILOSOPHY

THE OBJECTIVITY OF MIND

IN the recent discussion of the relations of realism and idealism, several important points of agreement between contemporary schools have been recognized.¹ Significant among these, we may note especially: (1) Speculative realism (*e.g.*, that of Professor Alexander) and dualistic realism (*e.g.*, that of Professor Pratt) agree with idealism in holding that the world should be regarded as a totality of organically unified inter-related parts. (2) Both realism and objective (or *speculative*) idealism agree that physical objects may exist independently of any individual conscious minds. (3) Both dualistic realism and objective idealism, together with pragmatism, agree that absolute knowledge of the physical world is not empirically attainable. Philosophical accounts of external nature, relying on empirical data, in a strict sense are hypothetical and rest back upon some such basis as utility, instinctive or "animal" faith, or speculative reason. It is an ancient custom of philosophers, however, to discuss their points of difference rather than agreement, and it is not my purpose here to violate the tradition, but to consider certain aspects of what appears to be the central issue between contemporary naturalism, realism, and idealism, namely, the objectivity of mind.

The question of the status and relationship of the "space-time actuality and the ideal element in things" has been called by Professor Muirhead, the main problem of philosophy. Only that ghostly

¹ Cf. *Contemporary Idealism in America* by twelve idealists; also J. B. Pratt, "Is Idealism Realism?" in this JOURNAL, Vol. XXX, pp. 169 ff.; C. L. Barrett, "Is Idealism Realism? A Reply in Terms of Objective Idealism," *ibid.*, pp. 421 ff.; E. S. Brightman, "The Definition of Idealism," *ibid.*, pp. 429 ff.; F. C. S. Schiller, "Is Idealism Incurably Ambiguous?" *ibid.*, pp. 659 ff.; J. B. Pratt, "What is Speculative Idealism?" *ibid.*, pp. 673 ff. In addition to these papers, the issues were discussed in a symposium before the annual meeting of the Eastern Division of the American Philosophical Association, which had as its subject: "The Status of Mind in Nature." Papers were presented by Professors Hendel, Murphy, and Pratt, and were discussed by Professors Blanshard, Brightman, and Barrett. Quotations from this symposium are from abstracts of their papers, as prepared by the speakers. Among recent publications on the subject, of especial importance is Professor G. W. Cunningham's *The Idealistic Argument in Recent British and American Philosophy*. (Editor's Note: The two following articles in this issue and two in the next issue, No. 8, continue this discussion.)

inhabitant of philosophical imagination, the solipsist, would deny the problem, or insist upon complete separation of the two. For others, the fundamental problem of knowledge and of action, as well as of metaphysics, is that of how the order of objects and events in external nature is related to the order of meanings and values in minds. Professor Pratt has insisted that no important difference seems to him to differentiate objective idealism from naturalism, but on this basic issue there is the widest opposition. For naturalism, meanings and values, as emergents or psychological creations, are something added on to the world of physical existence. They are either derived from the meaningless and valueless processes of nature, and are of secondary status, or if any priority of importance is conceded to them, it is because from them, human beings secure satisfaction.

For objective idealism, on the other hand, meanings and values can not be adequately explained in psychogenetic terms, or as derivatives from anything in the structure of the real world which is genuinely alien to them in its nature. Quite aside from the metaphysical problem of how human experience, with its organization in terms of meanings and values, could be produced by a world-order whose regulative principles had nothing in common with such an organization, there is also, and nearer at hand, the problem of *knowledge*. Since any inquiry whatsoever into the existential or factual nature of things must be carried on by means of hypotheses and verification formulated in terms of the mind's order of meanings and values, it would seem folly to talk of *understanding* nature in any other terms. Judgments of *factuality* are themselves value judgments, and the predication of *existence* involves valuation. This does not mean that a natural order alien to the order of mind might not *be* in some sense, and certainly it does not imply that the external world is dependent for its being on being perceived by a conscious mind, but it does mean that only in so far as the order of external nature is in unison with the mind's order, can human beings understand or act purposefully in it. *The individual subjective mind is to be distinguished, not from, but within, its world.* From one point of view, for the particular mind, the objective world may appear to be something opposed or even alien, something "other" than itself. But the dualist errs in taking this to be the only point of view. In another and more profound sense, the particular human mind must regard itself as a part of and genuinely one with that world, for it is not on the side of their separateness and difference, but in their unity, that the possibility of knowledge, even that degree of practical knowledge requisite for prediction and control, rests. As Professor Alexander points out, "Strictly speaking, it is this

totality of knower and known, of subject and object, which is true or good or beautiful" (*Space, Time, and Deity*, II, 238). One would expect a view thus emphasizing the unity of the order of human mind and of external nature to be received very cordially by the realist, for it provides one, if not, indeed, the only, thoroughly consistent basis for realism.

Naturalism has recognized a degree of unity in the order of mind and of physical nature. It has sought to deal with mental life in terms of those characteristics which it has in common with levels of existence below it. But mental life reveals, and is differentiated by, other characteristics which are not evident in physical nature. These have persistently haunted the naturalist as a kind of remainder or *addenda* left over after his account is finished. Since they include most of what seems to human beings to be or possess any significance, the inability to deal with them successfully is a serious disadvantage to a philosophical system. The objective idealist, on the other hand, assigns priority to mind. Finding mind to be the fullest and highest expression available to us of the order of the world, he insists on what seems a reasonable course in metaphysical investigation, namely, that of seeking to understand the less by the greater. He recognizes quite frankly that unless we take the order of mind to be a genuine expression of the order of the real world, our judgments of *fact* are as idle as our judgments of value; whereas if we do admit such unity, meanings and values present a real and fundamental aspect of the nature of things. Other interpretations than those which we label "factual" may also present that which is true and real. The interpretations of poetry and art, of morality and religion, of social tradition and all the varied interests of utility, embodying, as they do, many of the most profound developments of human thought, need not be dismissed as too human to express something ultimate and real in the nature of the world. The same external order provides objects at once of scientific, esthetic, religious, moral, and utilitarian interpretation. To say that the order of meanings and values, on the basis of which all of these, and every other interpretation of human thought, must proceed, reveals the nature of the human mind, but not that of the real world, is to call Nature something genuinely closed to mind. Having gone thus far, there is no logical escape from denying intelligibility to the world and even pragmatic value to thought and action. The objective idealist prefers to regard the order of mind as conditioned by and expressive of the world-order which produces it. He prefers to regard it as no less a revelation of the nature of the universe than that existential world which he knows, and can know, only as one of the constructions of this interpreting mind. The only

satisfactory escape from the egocentric predicament is through faith—faith in the validity of the external reference of the mind's interpreting activities. If our knowledge is only of its ideas and not *through* its ideas, utter scepticism is inevitable. But though the external world is saved for us only by faith, it is a faith backed by necessity. Deprived of their objects, all activities of thinking, of willing, of feeling, all inclinations to take interest in or oppose anything, all recognition of self and of responsibility, would lose their significance, and indeed, would be impossible. Thus the sole rationally justifiable basis for an acceptance of the existential world, is located in the imperative character of value, as, also, every judgment and interpretation of the existential character of the world is formulated in terms of the mind's order of meanings and values, and depends for its validity on a oneness of this order with that of the real world.

When Professor Pratt finds difficulty in differentiating objective idealism from naturalism and suggests that the former has nothing "specific" and "important" to say (a rather courageous statement in view of the influence which the view has exerted over Europe and America since the time of Hegel, and in important aspects since Plato)—one can not but suspect that it may be because he has overlooked, at least in his discussion, the whole problem of the status of meanings and values. Such an evolutionary account of the development of our perception of these as he suggests, does not, of course, reach the real problem itself. The omission is a serious one, but I shall not speculate as to whether its cause may possibly be the difficulty, to which Professor Murphy called our attention, which realism, especially dualistic realism, has always encountered in dealing with the subject. Neither mere physical activities nor mere sensory awareness are equivalent to mind—quite literally certain sensing beings have lost or never possessed a *mind*. The chief and unique characteristic of the human mind, that which differentiates it as *mind* from other bodily functioning units, and that which gives to it particular significance not shared by such organic activities as those of respiration and digestion, is its organization as a coherent order of meanings and values. A discussion of the nature and status of mind which omits from consideration this primary characteristic is perilously like the proverbial performance of *Hamlet* with the Prince of Denmark missing. For it is to discuss *mind* without noting its basic order of activities of selection, arrangement, and classification, its mode of verification, its social implications, its whole regulative and legislative functioning, and that organization of interests which constitutes the structural basis of human culture. Far from making the nature and status of these clear by saying they are ac-

tivities or functions of mind, we must recognize that it is through them alone that mind is to be understood; indeed, it is in them that mind exists. If the dualistic realist is to offer us any enlightenment on the nature of mind, can he afford to ignore them? If not of them, as presenting the constitutive principles of a functional order, then of what is he speaking when he talks of *mind*?

I can not be altogether sure from Professor Pratt's statements. This is unfortunate, for in dealing with his vigorous challenge to any belief in the *objectivity* of mind, there would be great gain in the assurance of a common understanding as to what, precisely, it is whose objectivity is in question. However, we are given some light on the subject—only a few rays, but very strong ones. "The necessities of biological evolution," Professor Pratt tells us, "have been such as obviously to develop in sentient beings symbolic perception and thought." "As a fact our knowledge of the physical is never as absolute as our knowledge of mathematics, but it meets fairly well the criterion of successful working and the possibility of prediction" (Symposium). We need not pause over historical questions to ask if the author of these words has not over-simplified the problem of origin by resort to the term "evolution"—employing it with too great a suggestion of a substantial or active agent. Nor need we delay to ask what, I suspect, might prove rather embarrassing questions about that other and more "absolute" knowledge, exemplified in mathematics—a problem of extraordinary interest in its bearing on theoretical science. Our present interest is with the primary philosophical problem of mind, that of its significance, its ability to work and predict fairly successfully. How is this possible? It might be replied that this has come about by a long process of conditioning and adaptation through which mental activities have been shaped and developed in accord with the general order of nature. Thus, it might be held that human minds, produced by natural evolution, reveal the real nature of nature, and since that which they reveal is a coherent order of meanings and values, this might be taken as an expression of the natural process, and the particular mind viewed as a conscious articulation of the mind-order of the world. But we are told in no uncertain terms that such an extension of mind to nature is not to be tolerated. Natural evolution has produced the individual mind in sentient beings, but its ways are not those of nature; it may respond fairly successfully to the order of external nature, but the interpretations on the basis of which the responses are made, are themselves constructed in terms of "subjective qualities" which are not "really objective," and, which, as "dualistic realism maintains . . . belong to the mind rather than to physical objects" (Symposium).

"The term 'mind'," Professor Pratt insists, "should be taken in the sense commonly given it by the best English usage. According to this usage mind is essentially subjective and individual and the extension of it to the objective and impersonal is not justified." The extension objected to here is clearly that of the concept of mind and not merely the word, or Professor Pratt's whole argument for dualism would be meaningless. It is unfortunate that the word "essentially" has been introduced, somewhat blurring the meaning, for it is used so frequently as a convenient means of graceful retreat from a position. I do not think for a moment that this is the reason for its presence here, but is it a qualification, intended to suggest that while in most respects, mind is individual and subjective, yet in others it is not so? I can not think so, for this would be to let the enemy within the walls, or more accurately, to destroy the walls altogether at certain points, and virtually to give up the fortress within which the dualist maintains his separateness from the world. Rather, the intention probably is to strengthen the statement: *essentially*, and not in some superficial way, mind is individual and subjective. I have no desire to dwell on ambiguity in the statement of a position, however, and at least it is clear that the dualistic realist believes that it is the fundamental nature of mind to be individual and subjective. This is in harmony with Professor Pratt's statement that "mind (taken in the individual and subjective sense) is distinct from everything else in nature," but it is not so clearly consistent with another statement made in the same paper: "Dualistic realism agrees that all things are inter-related; that everything is characterized by its relations; and, therefore, that every physical object is in part characterized by its relations to minds" (Symposium). Perhaps this is what is meant by the "essentially"—in some minor way objects and minds are characterized by their inter-relations, but in the main, objects are independent and minds are individual and subjective. In any case, the point which I wish to suggest is that "essentially" mind is not subjective or individual, and that particular human minds are *minds*, and not merely psychological activities, because they express through their own conscious organization, an order which is social, and even broader, which is universal.

No totality can be altogether explained by analysis of its parts, for such analysis leaves out of account those characteristics which are distinctively of the whole, as such. Atomization of human experience, its analysis into simpler and simpler forms, has failed to yield to the naturalist a satisfactory account of that experience on the side of those distinctive characteristics which make it what it is, that is, *intelligible experience*. The unique *structure* of the whole, no less than its constitutive contents, demands consideration.

This may be explained in terms of some more inclusive order to which it belongs, but it is never to be explained through a study of what is less inclusive. Now no one would deny that in part, our experience has a characteristic of privacy, or that conscious activities are closely related to bodily processes. But to stop with this privacy, this aspect of individualness and subjectivity, would be to leave the behavior and significance of the human mind quite unaccounted for. *First*, it must be noted that the human mind has a social character upon which the significance and even the existence of its subjective and individual characteristics are in large degree contingent. One need not go as far in emphasizing this social character of mind as has Durkheim, or possibly even Professor Dewey, but not only has such an idealistic pragmatist as James pointed to the "compounding of consciousnesses," but also so thoroughgoing and consistent a realist as Professor Perry has pointed out that: "Two or more minds become coterminous and commutable through containing the same elements." If our methods of verification are almost entirely social, so, too, is our mode of knowledge, which is dependent on some form of inter-communication. If we meet, or seem to meet, problems which are exclusively our own, yet to them we bring habits, memories, and a whole technique of thought and action developed under social influences, within social situations, and in terms of social goals. Long ago, Heraclitus observed that it is only men asleep who live in private subjective worlds, for when they are awake, not only do they live in the same world, but they live there *together*. In a complementary unity with society, that which may appear individual and subjective realizes its own significance in terms of responsible human personality.

Second, it must be noted that it is not alone in relationship to human society that the individual and subjective mind discovers its contingency upon an objective world, and bursts the bounds of its hypothetical isolation. This is true, also, in relationship to external nature. For none of us is "nature" merely a parade of sense-perceptions, viewed by a spectator. It is an organized realm to be known and dealt with in terms of meaningful and valuable interpretations. Our experiences of physical nature may appear successively, and in a sense seem external to one another in a temporal series, but any activity of thought or will with reference to them requires that they be regarded in terms of their relationships within the unified order of mind. Particular experiences or ideas could never be associated on the basis of their differences and separateness alone; all association must be based fundamentally upon a universality or identity recognized within or beneath differences. Likewise, a unity between subject and object, between

the subjective order of mind and the objective order of objects and events, must constitute the basis of cognition if there is to be knowledge at all. Similarly, volition relies upon harmony between purpose and consequence, and assumes the objective validity of its goals. "Be it noted," warns Professor Adams, "neither the hidden meaning which nature reveals to the poet's imagination and insight, nor the precise mathematical relationships which she reveals to the physicist, are facts which confront us and which we literally find. We search for them, and finding them, we acquiesce and delight in them, we recognize them as real because, in the last analysis, they greet us as the embodiments of our own meanings, and with them and with the nature which is built up around them, we may and do have fellowship" (*Idealism and the Modern Age*, p. 161). Intelligible order is not confined to a small psychological island in the universe, but thus constitutes the form of the whole. It may be true, indeed, that whatever he knows of the social or of the physical realms come to the individual through the particular activities of conscious life within his own body, and possibly it could come in no other way. But the important point is not that of the vehicle of such experiences. It is that in them the individual subjective mind reaches out and discovers the sole meaningful activity for itself, discovers its own contingency and that which is requisite to its completeness, finds its significance in unity with what it had called objective, and, in short, realizes itself to be something which, in individual isolation, it could neither create nor find.

Thus the individual mind is regarded as a functional order, expressing in conscious form the structural principles of the universe, or, in Bosanquet's phrase, as a "focus" of content. It is not separated from, but the highest expression of, the order of nature. "In the appearance of consciousness and self-consciousness Nature reaps the final and supreme result, not only of all the complex adaptations of the bodily organism, but even of its whole character as a mechanical system" (Hoernlé, *Idealism as a Philosophy*, p. 265). Being the most highly-developed expression of the world-order which we know, it is viewed as offering the most profound insight into the nature of that order. In undeniable fact, all knowledge of the world must be attained through its organization, but this is no loss since it possesses not only the capacity to reveal what is below itself in the order of development, but also that which is to be discovered in its unique characteristics, and to be observed from no other vantage point. When the idealist speaks of the world-order as "mind," he does not refer to consciousness, but to that coherent order which, for sentient beings, is expressed in the order of conscious life. The demands of this order of mind, as we

know it, for rationality, for meaning, for value, are articulations in the language of consciousness, of an imperative which comes, not from the nature of psychological processes alone, but from the structural order of the real world by and within which those processes were developed. Psychological abstraction may provide descriptions of simpler parts which function in the life of human minds, but no mechanistic putting together of such parts can adequately account for the experienced unity and system of that from which they were severed by the original abstraction. On the other hand, this system *as a whole*, may be explained in terms of a *more* inclusive order within which it functions—and in the case of human minds, the presence of contingency requires such explanation.

It is from this contingency, this fragmentariness, in human minds, that error, evil, and that whole realm known as *appearances*, arises. Appearance, as Professor Kemp Smith remarks, "is a simplification of reality, demanded for the purposes of animal and human existence." Why Professor Murphy should think it necessary that the objective idealist "wobble" into subjectivism in order to admit the possibility of finite limitations, is not clear. However close the organic relationship of part to whole, they are not equal. The limitations of the part are genuine characteristics of its nature *as part*, though they may be antagonistic to and obscure its more basic unity with the whole. To recognize these limitations, moreover, and to evaluate them as *error*, *ignorance*, and *evil*, is to employ a standard which reaches beyond the immediate situation to a larger order of meanings and values taken to be *real*. The recognition of imperfection on the part of the individual mind is an expression of its contingency upon a larger order of completeness and perfection. Realizing a universality and ultimacy expressing itself within the limitations of its own order of meanings and values, it applies such tests as coherence, consistency, and worth to particular experiences, justifying them as *real*, or condemning them to the status of *appearances*. The demand of thought that its meanings and values be realized in the objective world, and the pressure of that world upon us for fuller understanding, create that restlessness of finite minds which compels their indefinite expansion. This problem of differentiating the real from the temporarily and locally apparent is the real and significant problem of knowledge. To it the idealist will devote his efforts tirelessly, refusing kindly but firmly to be distracted by invitations to solve the riddle of putting together in knowledge, two parts of a world artificially broken apart by an abstraction in dualistic metaphysics.

Professor Pratt has insisted that objective idealism may be mentalism, or naturalism, or theism, but that it can not be itself, for

lack of "specific" and "important" points of differentiation. Quite rightly, I think, he points out a similarity in the insistence of several schools on the organic unity of the world. I have attempted in the present discussion to suggest the contingent nature of human minds as a point of difference between objective idealism and all forms of genuine dualism. Also, it has been shown that naturalism and idealism differ on the fundamental problem of the status of meanings and values. Mentalism was treated in certain differentiating aspects, apparently to Professor Pratt's satisfaction, in an earlier paper. Nothing, however, has been said of theism,—and only this, I think, need be said: *theism* is a term which is employed with many philosophical connotations, varying from a mere monistic assertion of unity in the world to that of a despotic government of the world by an anthropomorphic Zeus. It is weighted, further, with innumerable varying and even conflicting religious implications and emotions. The idealist may or may not find certain of these religious conceptions compatible with his philosophy. But I have attempted to suggest certain aspects of this philosophy without introducing a word either favorably or otherwise whose presence would certainly add confusion rather than clarity to the discussion.

Unfortunately, space does not remain to consider in detail Professor Schiller's reduction of—was it twelve?—forms of idealism to humanism. Since anything which can be said in philosophy is the expression of a human activity of judgment, it follows, of course, that the idealist's belief in "the final cosmic significance of value, coherence, and systematic completeness," must be such. But not all activities of human judgment are equally satisfactory. Idealism would insist upon trying to determine what it is that makes some more satisfactory than others. Its own conclusion is that this is because they express the *real* order of things more adequately, and that we human beings are not as ignorant as Professor Schiller thinks, for from our experience we are able to learn not a little of the actual nature of our world. Should not Professor Schiller take his own Protagorean dictum more wholeheartedly? Should he not insist that *man is the measure of all things*—not merely the measure of what he will call good or true, but the actual measure, within the limits of his finite being, of what is genuinely and *really* true and valuable in the nature of things? Professor Schiller's faith in the utility of human thought would then have a justification in reason as well as in experience (itself a rational construction)—for man would be viewed as a focus within which the order of nature receives conscious expression.

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THE ORGANIC UNITY OF PHILOSOPHY

THE recent discussions¹ are a commendable effort to find a place for realism in the idealistic camp and for idealism in the realistic. That neither can dispense with the other has been conclusively shown. But that neither can be the other seems quite as evident. What seems thus true of realism versus idealism is equally true of monism versus dualism (whether epistemological or metaphysical), and of rationalism versus empiricism.

How can we do justice to these different schools and not dull any of the sharp contrasts that constitute their glory? Certainly not by aiming at an eclectic blend. The futility of an eclecticism that merely blurs legitimate issues and succeeds only as it ignores has been often demonstrated.

Now each champion of a type of philosophy implies or assumes much that he does not express. This unexpressed element in his system is what makes it work. In other words, a particular school is an outcropping with much of its wealth concealed below the surface. Philosophies differ in their epistemological value according as they reveal and consciously elaborate this common deposit of philosophical truth. Let us glance at a few of the main types.

We may think of the various forms of realism as for the most part transitional, moving from the strictly scientific into the philosophical field. They mark the least advance into pure philosophy as distinguished from the sciences, and acknowledge that advance grudgingly. They like to be considered scientific. Hence realistic schools exhibit ingenious devices for answering philosophical questions with a minimum of philosophical penetration. Realisms taken in their exclusive character leave us with a sense of their indecisiveness. And yet they are a vein of rich ore leading directly to the mother-lode. Realists are sure that something outside of us is real, and we all agree. When they undertake to characterize that reality, they prove to be extreme idealists; that is, their *Realen* so far as these are known, are thought-constructs. The realists can have other forms of the real only by refusing to tell what they are. Experience, moreover, includes much more than the realists' problem encompasses. When they perceive this and try to enlarge the scope of their interests, they pass out of realism as a distinctive type of philosophy.

The idealist, on the other hand, recognizing that the real, so far as known, must be ideal, that is, must be a thought-construct, jumps to the conclusion that the universe of reality is a thought-structure. Reality is a system; and the thinker who traces out the interconnections most fully has the most adequate philosophy. But when the idealist stops with the thought-structure, he has, instead of the con-

¹ See footnote 1 in preceding article.

cretely real, only a chart or diagram that indicates the forms of nature's unfolding. Thoughts are fixities, without power in themselves to change. Hence the idealist who holds strictly to the belief that reality is a system must relegate change to the realm of appearance, where it still needs explanation. Idealism, like realism, offers us a fragment for the whole.

Within certain limits idealism is so manifestly true that the impartial thinker is impelled to seek some mediating conception that will unite it with realism. One of the most successful of recent attempts at this mediation is made by the pragmatist. With no commitment as to the nature of the objectively real nor as to the part that thought plays in constructing reality, he proposes a new start, assuming that we have a right to regard that as real which declares itself by its resistance and that as true which yields approved consequences. He is not bound by any dogmatic limitations. Indeed his freedom merges into indefiniteness. He is sharply criticized as being superficial, as missing the true depths of philosophical reflection, as being in respect of theory merely commonplace. To defend himself from such criticisms the pragmatist has had to explore the territories held in fief by other groups, and he succeeds amazingly in utilizing the material of divergent systems. Where the realist halts in the presence of critical questions, and where the idealist gropes in the darkness outside his one great truth, the pragmatist, free to draw with equal facility upon the resources of both these rivals, makes notable headway. Whatever we may think of philosophy's future, we may confidently expect pragmatism to be increasingly fruitful and suggestive.

Yet pragmatism virtually abandons the quest that calls forth the realistic and idealistic endeavors. It is as if an outsider should join some disputants who were defending their exclusive tenets without convincing one another, and he should say, "Cut out your logic-chopping. Your questions are academic. They belong to the cloud-land of pure theory. Let's turn to the practical issues of life. Starting with these, let's see how far we can go in understanding them." The value of the outsider's interference lies in breaking down the inhibitions of the antagonists and compelling them to take a different point of view. But the fundamental theses of both realism and idealism are still to be reckoned with. The organic connections between the two are hidden beneath them. Every attempt at mediation leads to that which underlies both, but finds expression in neither.

What is there, then, unacknowledged in these types of philosophy, that makes each seem to its adherents final and adequate even though its shortcomings can be so easily exposed? May we not discern some-

what of the rich truth that underlies all the schools? No new discovery is necessary, but rather a new emphasis upon what the philosopher seems constitutionally averse to recognizing, yet what every thinker must sooner or later see at least through a glass darkly. The fable of the blind men and the elephant has been true of philosophers quite long enough. The intricate connections that bind the schools together and will not allow any one of them to preëempt the field for itself are *prima facie* evidence that some neglected insight should be within reach which would serve as the organizing principle and would exhibit philosophy as a growing unitary whole.

Where may we look for this principle? It is not far from the thinking of every man. Perhaps the most effective way of bringing it to light is to examine our commonest experience, the apprehension of a world of objects.

In the world as perceived, objects are substantial, that is, they endure through time and maintain themselves in space, yet change continually. The familiar analysis need not be carried further. It is evident that whatever the objects are apart from our knowing them, they are for the knower the result of a complex construction involving continuous acts of memory to recover the past, a uniting of the successive incipient appearances, and the building of objects that have various changing characteristics. We as knowers are constructively active in sense perception; and the perceived world of objects, in so far as perceived, is the result of our activity.

The perceived object that is a part of the physical world differs from the object that we freely imagine in our daydreaming. The one results from controlled activity; that is, we see the physical object only when we fulfill the conditions of perception, and then we must see it as we do, if we hold to our sanity. The other, the day-dream object, is our plaything; we can do with it as we please. The contrast between compulsion in the one case and absence of compulsion in the other constitutes the logical starting-point of all reflective thinking about nature and ourselves.

Two conclusions may be drawn immediately. In the first place, the knower can never logically be identified with the known object. The one is creatively active; the other is the concrete expression of that activity. Most of the confusions in philosophy have come from slighting this distinction. In the second place, the control must be independent of the knower. If we follow the custom of recent psychologists and call the form of the control a stimulation or stimulus, we may say that we do all our constructive work in sense perception in response to stimulations, the source of which is not in ourselves.

The next fundamental question, then, for philosophy would be,

Whence the stimulations? Practically all the logical possibilities have been canvassed in trying to find an answer. The simplest and safest answer would seem to be the cautious affirmation of only so much concerning this source as the plain facts of experience require. But this is an exacting demand upon our critical intelligence; for the weight of custom and convenience are on the side of tradition, which finds the source either in the object perceived or in some undefined objective essence which in a vague way serves as the archetype of the object seen. When these views become critically untenable, there is a diligent search among conceptions of force or of energy or even of life considered as a diffused entity. These, too, have their serious difficulties, which well-nigh cancel their value as explanations. Warned by the many failures to find the source of stimulations in the multiplicity of objects or in any form of force or life, the careful thinker will revert to the principle of economy, namely, to assert nothing about the nature of the source except what the actual situations demand.

Now to grant that the stimulations yield for us a cosmos of objects related in inconceivably complex ways leads directly and inevitably to the conclusion that the stimulations all come from the same source. But this conclusion is embarrassing to those who are accustomed to describe sense perception as a process of mediation between the object and the brain. Such persons experience a wrench in having to give up all this as at best auxiliary interpretation. They find it difficult to hold strictly to the critical view, which requires that they recognize only the immediate dynamic transaction between the percipient and the source of stimulations. On any view nothing follows until the central stimulation takes place. Hence that is as much of the causal mechanism of sense perception as we have a right to acknowledge in our critical stripping.

That the stimulations all come from the same source is made even more evident when we realize the implications of our having a common world. I may talk about my world, which is uniquely mine, and you can understand me as if I were talking about your world, which is uniquely yours. The least we can say of this marvelous experience is that the stimulations affecting me in sense perception have intimate reference to the stimulations you receive.

Consideration of such features of our interrelated experiences leads to various other conclusions which are of profound significance in determining our theory of life. Two of these conclusions are so fundamental that they should be mentioned. (1) The source of stimulations or control in sense perception is cosmic in its scope and duration; for our world of sense perception is the basis of our

inferring a universe immeasurably beyond our power of direct apprehension. We build out our sense world into the illimitable spaces, and we infer a past that extends through eons of time. (2) This cosmic power, which is the source of control in sense perception, knows at all times what it is doing; for it so operates upon us that the world as we apprehend it becomes for us a world of order even throughout continuous change—an intelligible system of interconnecting activities.

For our present purpose it is not necessary to carry argument further. The principle of explanation needed to bring order and coherence into the entire realm of philosophy is now manifest. It is none other than the principle of selfhood.² Our world is the joint expression of ourselves and the cosmic power working upon us and with us. This world has no existence for us alone. It has no existence for the cosmic power alone. It results from a joint enterprise. The cosmic power furnishes the form of control, and we respond constructively, or figuratively, as James would say. The world that we perceive, then, measures our ability to understand or interpret the controlling stimulations. We become interested in knowing, in manipulating, in appreciating this world; and from these interests spring up the great problems of civilization, of science, literature, art, morals, religion.

Philosophy is a reasoned view of life as a whole—of all that can be known about nature and man and the cosmic power. But within the field of philosophy we have many interests, each of which focuses attention upon some one aspect. We may study the intellectual structure of the world, its laws of change, its meaning; and we thus work into idealism. Or we may be curious about the nature of reality—in what sense the objective world is independent of us, and what types of reality³ we must recognize. This is the source of realisms. Or we may be concerned to discover the fundamental principle of validity in thinking; and pragmatism emerges. In like manner we could account for every school of thought, each being justified as the legitimate response to a human interest within the one field. What are now different *types* of philosophy would then be different *tasks* of philosophy.

A reasonable defense could thus be made against the charge that philosophy merely circles about from intellectualism to romanticism, from romanticism to voluntarism, and from voluntarism to intellectualism again. Our interests vary. Progress is the result of concentrated effort in one direction. When movement in that di-

² A view similar to that of Professor Schiller; see this JOURNAL, Vol. XXX (1933), pp. 659-664.

³ These types are considered in my article, "The Search for the Concrete," *The Monist*, Vol. XXXIX (1929), pp. 80-98.

rection slows down, another interest with its separate task engages our attention. Human nature is given to one-sidedness; and every one-sidedness in philosophy starts another. One reign of idealism provokes an uprising of realism; monism provokes pluralism. But philosophy is growing richer as thinkers along various lines extend the radii of discovered truth.

Philosophy thus viewed is a comprehensive unity. Though forever incomplete, it is forever growing as man's insight grows.

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IDEALISM, MENTALISTIC AND "SPECULATIVE"

IN his latest query as to the meaning of "idealism" and its varieties,¹ Professor Pratt interprets Royce as teaching that "Reality is the content (or object) of one Absolute and conscious Mind," and states this as a possible meaning of so-called "speculative idealism," though concluding that this definition would not sufficiently distinguish speculative idealism from mentalism. The crux of this proposition is to be found in the expression "content (or object)." By the mentalist, these two terms may be regarded as synonymous; but not so by the "speculative," or as I should much prefer to call him, the objective idealist. When I see a tree, I see a *tree*, not an *idea* of a tree: the tree is my "object," the idea or percept is the "content" of my mind when I see the tree, and in true perception there is no excuse for confusing these two factors. Here we have a perfectly clear-cut distinction between the mentalist, who thinks of all reality as *contained in* some mind; and the objective idealist, who only thinks of reality as always the *object of* some mind. How anyone except an orthodox Platonist can call himself an "idealist" and reject the latter proposition it is hard to see, though it is perfectly possible to be an idealist and reject the *former* proposition.

If this account of idealism and its two leading varieties is accepted, it is again hard to see why Professor Pratt should be "bewildered" by the passage from Professor Cunningham's exposition of Creighton which he quotes on page 679 of his article. Objective idealism *does* deny "that the object of knowledge must be reduced to terms of mind," and *does* teach that "mind and the objective system of nature are distinct." "The standpoint of concrete experience" to which Professor Cunningham refers is that standpoint which sees the mind and its object as distinct and yet interdependent: mind is that "aspect of conscious life which is experience" which is *aware of* a distinct "objective system of nature"—distinct,

¹ This JOURNAL, Vol. XXX, pages 673-684.

but not independent. For mentalism, on the contrary, the system of nature is *of the stuff* of mind, indistinguishable from mind, content of mind. There seems no good reason for confusing these. Nor is there any "epistemological gulf" between mind and nature on the non-mentalistic hypothesis, since by definition mind and nature are interdependent, "organic" to each other.

As to the question of idealism *versus* realism, these are certainly, both of them, notoriously ambiguous terms.² And yet, may we not say of them in very general language, that idealism is the doctrine that "ideas," in some sense of that word (Plato's, Berkeley's, Hegel's, or someone else's) are basic realities, and "things" real only in a secondary sense; whereas realism holds that "things" (*res*) are basic realities which differ essentially from ideas?

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BOOK REVIEWS

Spinoza. Band II: Aus den Tagen Spinozas, Geschehnisse, Gestalten, Gedankenwelt. I. Teil: Das Entscheidungsjahr 1657. STANISLAUS V. DUNIN BORKOWSKI, S. J. Münster: Aschendorff. 1933. iv + 495 s. RM. 20.

This work is the second of a proposed series of four volumes of which the first, *Der junge De Spinoza*, appeared twenty-three years ago. In the present volume, Father Borkowski endeavors to give a complete account of the political, social, literary, and intellectual conditions on or about the year 1657, which he considers the decisive year in Spinoza's life. The author is not interested in tracing the philosophy of Spinoza to other sources and in showing the fountains from which he drank, but in exhibiting the background against which Spinoza worked and the climates of opinion of that period.

Father Borkowski claims that the originality of Spinoza is lost when his philosophy is regarded as the culmination of medieval Jewish Scholasticism or as the fulfillment of Cartesianism. These views, guided by the exaggerated importance of the historical method of the nineteenth century, confuse the rudimentary with the finished product, the potential with the actual, the ground with the consequent. They mistake the spirit of an age (*Zeitgeist*) for "the style of all times." The merit and originality of Spinoza, says Father Borkowski, consist in the fact that while he lived in *his* age, he grasped "the stream of adequate ideas" of all times. He understood the system of eternal truths which can not be traced back to the writings of any one period. This stream of adequate ideas the

² See my *Rifts in the Universe*, Yale University Press, 1927, Appendix A.

author promises to develop fully in the third and fourth volumes. (The reader will find a synopsis of this system of adequate ideas in the author's *Spinoza nach dreihundert Jahren*, pp. 51-102, which appeared contemporaneously with this volume.)

Father Borkowski's wide learning coupled with profound philosophic insight by far overbalance his difficulties in style. The work is so scholarly and so thorough that it will be hailed as the most important contribution to the literature on Spinoza. Students of Spinoza will await with eagerness the publication of the last two volumes of this series.

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Arturo Schopenhauer. L'Ambiente, la Vita, le Opere. UMBERTO A. PADOVANI. (Pubblicazioni della Università Cattolica del Sacro Cuore, Scienze Filosofiche, Vol. XXI.) Milano: Società Editrice "Vita e Pensiero." 1934. 214 pp.

This volume by the Professor of the Philosophy of Religion of the Università Cattolica del Sacro Cuore at Milan is a beautiful and well-documented study of Schopenhauer as a historical figure. It presents the philosopher in his intellectual environment, his physical career and his influence on "his major disciples; Wagner, Nietzsche, von Hartmann and Deussen."

Professor Padovani's chief interest is to present the ascetic or Christian aspects of idealism, and he presents Schopenhauer's *vita meditatio mortis* as one form of the ideal. "If the end of man is the celebration of earthly life, as modern humanism insists, then the "ideal writer" would be, say, Hegel. But if the end of life lies beyond, and life has value only as it serves a transcendent goal, and if every form of life is therefore as such indifferent and the most perfect form is the mortification of life in view of its goal, then, within this same modernistic environment, the "ideal writer" would be Schopenhauer" (p. 113).

H. W. S.

Some Aspects of the Life and Work of Nietzsche, and Particularly of his Connection with Greek Literature and Thought. A. H. J. KNIGHT. Cambridge: The University Press. New York: The Macmillan Company. 1933. 194 pp. \$3.75.

Very true is the author's statement that, in comparison with French and German work, "the English-speaking nations have contributed little of any value" to serious Nietzsche criticism. The present book certainly steps forward to a better understanding, though it explicitly disclaims being a complete interpretation, and

should not be read as such. The full title of the book must be kept in mind, and its central contentions can best be indicated by the following quotations:

The essential points in Nietzsche's final *Weltanschauung*, . . . though also undoubtedly affected in great part by strains of influence which do not proceed from Greece, are derived to an astonishingly high degree from Greek thought, and especially, from pre-Socratic philosophy. [P. 183.]

Nietzsche's Greece (we can not insist upon this too strongly) was the period after Homer, after Hesiod, and before Aeschylus, the age of *lyric* poetry, and of the *Tyrants*. The lyric poet and the tyrant together make up a great part of the *Übermensch-Zarathustra-Dionysus* ideal. From his admiration for Archilochus, for Theognis, and for Peisistratus, Nietzsche derived a more definite and more passionate enthusiasm for the lyric and for the view of life which the lyric represents (or which he thought that it represents). From this enthusiasm he goes on to the conception of Dionysus, and thence to the Superman. [P. 22.]

We find that Nietzsche thought that the Greeks were the same kind of people as he meant his Superman to be, inspired by the same "Will to Power" and the same Dionysiac enthusiasm, and generally in agreement with his own belief in the limited validity of any ethical code. This view of Greece is widely accepted to-day as a true picture, whereas when Nietzsche first put it forward he was universally derided. But the more carefully and impartially we consider the history, institutions, habits, religion, and literature of Greece, the more we shall be led to agree that he was right. [P. 149.]

Professor Knight argues this view most interestingly and closely, with abundant citations drawn from every corner of Nietzsche's works and manuscripts. He must, of course, admit that Nietzsche arrived at his views of Greece under "the pressure of his environment" and of his personal constitution. It is in fighting against his own weakness and what he took to be the sicknesses of European civilization that he adores Greek health and vitality. Professor Knight also admits that "a thorough and unbiased examination, undertaken by a non-German critic, of Nietzsche's connection with German civilization and his place in the German intellectual and literary tradition . . . would be a most valuable contribution to the study of Nietzsche" (p. 188). But he inclines to the view that Nietzsche's dependence on German traditions has been almost constantly overrated, while the influence upon him of the early Greeks has been underrated. One is tempted to ask, however, whether Nietzsche's kinship with German culture, even though he protests against it, is not evident precisely in the manner, if not in the content, of his views on the Greeks. By underrating his connection with German civilization the view of Nietzsche here presented, in my opinion, makes too little of his rich subjectivity, and perhaps gives too great prominence to a naked "will to power" concept.

A special point of great interest is Professor Knight's contention that Nietzsche's outlook on the world was deeply and basically

pessimistic, and that he did not really succeed in converting himself to an optimistic yea to life by Dionysian inspiration. One of the most attractive qualities of the book is the admirable balance it holds between understanding appreciation and criticism. The last sentence reads: "For Germans are rarely good critics or good stylists; and, as we have noted more than once, it is as a critic and a stylist, and only as these, that Nietzsche excels."

H. L. F.

Collected Papers of Charles Sanders Peirce. Edited by CHARLES HARTSHORNE and PAUL WEISS. Cambridge: Harvard University Press. 1933. Vol. III, *Exact Logic*. Pp. xiv + 433. \$5.00. Vol. IV, *The Simplest Mathematics*. Pp. x + 601. \$6.00.

The original speculative power and acuteness of Peirce's mind appear at their very best in the present two installments of the *Collected Papers*. But space prohibits anything other than a brief indication of some of their striking contents.

Volume III consists entirely of previously published papers on what goes by the ill-fitting name of mathematical logic, and includes his great series of papers on the logic of relatives. Reading them consecutively one is impressed how steeped Peirce was in the mathematical researches of his day, and how the inquiries into the nature of generalized algebras by men like his father and Sylvester molded the course of his own thinking. There can be little question that Whitehead's *Universal Algebra* represents the culmination of some of Peirce's attempts in that direction. Many of the papers are now primarily of historical interest; and looking back upon them from the vantage ground of the elegant discussions in the *Principia*, they seem needlessly difficult simply because of the clumsy symbolism Peirce employed. And yet, in spite of the frequent incoherence of his statements, it is an inspiring experience to see him grappling heroically with novel ideas, conquering one only to attack another. These papers reveal that while Peirce strove mightily to achieve a philosophic system, he was essentially a man of great visions, but incapable temperamentally of organizing his ideas into unity and coherence. It goes without saying that he anticipated much that was independently discovered by others subsequently, e.g., the logistic thesis concerning the nature of mathematics, or the essential features of Poincaré's theory of applied geometry as a "convention." In addition, material more or less adequately treated in the preceding volumes of this edition, is restated and often amplified in both of the present volumes, so that a somewhat clearer light is thrown on such things as "fallibilism" in mathematics and the theory of signs. His comments on a variety of logical atomism are

eminently worth reading, especially to-day. His defense of "infinitesimals" is provoking to say the least, even if not clear or convincing, and even if it seems to miss the point as to why the idea has been abandoned.

Volume IV consists chiefly of hitherto unpublished material on the foundation of logic and mathematics. Peirce anticipated the ideas expressed in Sheffer's stroke function, and the ideas as well as the use of the currently prominent matrix method. He made very full studies of the cardinality of classes, of the well-known contradiction, of orders of infinity, of linear algebras as instances of the general theory of relations; and his demonstrations have interesting, though sometimes uncritical, variations on the classic proofs. His judgment on the metaphysical importance of some of these studies seem now curiously unbalanced, e.g., the significance of the projective theory of distance; although anyone who has been exalted by that subject will surely forgive even an extended period of intellectual insobriety. His discussion of the logical priority of ordinal to cardinal number is particularly good and valuable, and ties up directly with the current *Grundlagenstreit* in mathematics. Also, little sermons on the value of logic, on how to read most profitably, on free will, on the issues of nominalism, and on the historical parallels between styles in architecture and types of logical theory, are to be found hidden away amidst technical discussions.

Peirce paid much attention to logical diagrams as instruments for the analysis of logical form, rather than as engines for calculation. And he regarded his Existential Graphs, a systematic scheme for representing geometrically any proposition however complex, as his *chef d'oeuvre*. A full account of it is included in Volume IV. But while the method is ingenious, and in many respects an improvement on the Euler and Venn diagrams, it is very clumsy; and it is difficult to attach to it the great importance which Peirce did. But perhaps the bearing of Existential Graphs upon Peirce's pragmatism will become evident in later volumes.

All in all, Peirce's technical mastery of detail and his grasp of metaphysical issues as revealed in specific subject-matter are most impressively exhibited in this latest volume of the edition. It does not offer solutions to many pressing questions; it does not even ask some that one would like to ask. But it is a mine of suggestions to him who has the wit and patience to ferret them out.

The editors have worked *con amore* in preparing the text for the press, and the high standards they set themselves in the previous volumes have been continued in this. Reservations must be made concerning their judgment and good taste in some matters. Thus, as

one instance, it is doubtful wisdom to place the contents of Book II, Chapter 4, of Volume IV after the contents of Chapters 1, 2, and 3. It is also a pity that all the Lowell Lectures are not to be published. I have noticed a few misprints. In Volume III, the third footnote on page 220 contains two misplaced vinculi; the equation on line 11 of page 326 is missing a variable x ; "uncovered" in the footnote on page 359 should be recovered." In Volume IV, Figure 17 on page 306 is incorrectly drawn; and the words in Figure 105 on page 367 should be inverted.

E. N.

BOSTON UNIVERSITY.

The Universe and Life. H. S. JENNINGS. New Haven: Yale University Press. 1933. Pp. 94.

In the 1933 Terry Lectures delivered at Yale University, H. S. Jennings presents a world-view from the standpoint of biology. What does life reveal about the universe? There are two ways of viewing nature: (1) the *outer* view which discovers physical facts and (2) the *inner* view which discovers mental facts. Many biologists (and even psychologists) ignore the inner data as too difficult to manage with precision. But life is more than mathematics. We must have the entire range of available facts in view. "Whoever excludes from science any class of the data of experience thereby proclaims that science cannot present an adequate picture of reality" (p. 14). Mental facts must be included with the physical, or we get a mutilated, fractional account of the world.

When biological facts are reckoned in, we find the universe a system that brings forth life, sensation, emotion, thought. Physical material may be "running down"; but biological material is "running up," developing rather than degenerating. In the rising tide of life nature embarks on new adventures, producing the living from the lifeless, the feeling and knowing from the unconscious and inert. "The universe is not given complete once for all" (p. 30). At first without life, the universe produces it and progressively develops what is really new. This is one of the most important discoveries of biology.

It is this emergent character of life that refutes the claims of mechanism. The development of life is unpredictable. The methods of nature employed at the physical level do not apply everywhere with uniformity. "Mechanism is a marked case of wishful thinking" (p. 41) not supported by experimental evidence. For experimental science a mental event causes action just as truly as a physical condition. Nature "delights in experimentation," and cares not how many mistakes occur in the process of groping its way. If man fails, the progress of life may go around him in other direc-

tions. Yet the very diversities and errors in these experiments dispute any pre-existing goal or guidance toward it. "Life moves into a million blind alleys" (p. 62).

Amid the maze of possible ways in a complex and deceptive world the management of life is a desperate problem. Life to succeed must be highly selective. "The penalty for making wrong choices . . . is destruction" (p. 68). The mental life of the organism consists largely in determining what to do to promote full and adequate life. This becomes vastly more complicated as one individual conflicts with another for life's values, or comes to recognize the equal needs and rights of others. To these demands no simple answer can be given; neither external rules nor inner conscience can show what is right for every situation. "It is only experience, it is only living itself, that discovers what things in life are worth while" (p. 78). Life is in the making, and the course of progress can be charted only as we explore the way.

In this brief volume the philosophy of H. S. Jennings comes to clearest and completest expression. The lucidity of the teacher, the method of the laboratory, the perspective of an open mind, and withal the breath of life pervade its pages.

PAUL E. JOHNSON.

HAMLINE UNIVERSITY.

Idealismo e Solipsismo. ENRICO CASTELLI. Rome: Angelo Signor-elli. 1933. 108 pp. 6 lire.

This small volume consists of three critical essays in Italian and one in French on *Idealism and Solipsism*, *Scepticism and the Belief in an External World* (Ontologismo), *The Initiation* (Principio) *of an Event and Initial Indeterminism*, and *Critical Reflections on the Problem of a Christian Philosophy*. The main interest of the book to the average reader of this paper would probably lie in seeing what an Italian Catholic philosopher would say in criticism of the prevailing mode of philosophy in his country. The arguments are entirely dialectical and tend to show that any form of idealism is solipsistic, even when there is a universal subject; that existence can not be deduced from ideas about it—or from essence—except in the case of God; that there is a difference between the initiation and beginning of an event, the latter of which alone, not the former, is the subject of physics; that a Christian philosophy is not only possible but necessary for understanding and justifying faith.

G. B.

La Mauvaise Conscience. VLADIMIR JANKELEVITCH. (Bibliothèque de Philosophie Contemporaine.) Paris: Félix Alcan. 1933. 159 pp. 15 fr.

This brilliant little book, brilliant both in its style and in the suggestiveness of its analyses, is really a philosophical study of remorse. The utilitarian conscience is, according to this distinguished sociologist, purely speculative, prospective, an anticipation of pleasure. The moral conscience, on the other hand, is retrospective and is generated by the "pains of pleasure" or by the discovery that a deed has yielded evil fruit. In its purest form, remorse or the "bad conscience" is "absolute pain," that is, the suffering produced by the discovery of the irreversibility of conduct; for though we are free to act, we are not free to undo what is done and what continues to work its inevitable consequences. The "turning of the creature upon the creator" produces the tragic sense of remorse, as God himself experienced it.

Remorse is, however, not merely retrospective pain, it is at the same time the beginning of moral convalescence. It initiates the dialectic of conscience, for though it is based on despair it is clinically efficacious; though it is the realization of sin, it is the discovery of inner "grace," one's real intention. Through remorse and its sequel, penitence, the sinner realizes that morality is based not on interests, but on intentions, and that the soul can regain its peace not by external undoing of what is done, nor by external expiation, but by the redirection of intention. In a vicious or pathological conscience remorse degenerates into regrets (which are vain) or scruples (which are anticipatory) or self-accusation (which is foolish) or the cult of "good intentions" (which undermine sincere "*bon-mouvement*"). The book is a fine sequel to the author's earlier work on Schelling and contains many incisive criticisms of recent ethical literature in France and Germany.

H. W. S.

Les Fondements du Droit. EMMANUEL LÉVY. (Bibliothèque de Philosophie Contemporaine.) Paris: Félix Alcan. 1933. 169 pp. 15 fr.

This is a collection of essays by one of the foremost French legal philosophers, and serves as an outline for his socialistic philosophy of collective right. The volume includes (Chapter VIII) a critique of this philosophy by Georges Ripert of the Law Faculty of Paris, which might well be read first, since it gives an excellent exposition of the development of Emmanuel Lévy's thought from 1896 to the present.

The fundamental thesis is that laws, duties, rights, and contracts are not based on individual property, but on collective confidence. The power of the state is the sum total of its members' beliefs in violence, that is, in their willingness to use force. In general, political and legal obligation is created by the collective *créances* or *croyances* (hence, credits) of the laborers. Labor is not submission, but trust or belief exercised collectively in social institutions (including capital). Destroy this trust, credit, or voluntary support, and the whole system collapses. This doctrine Lévy preached before the war as a revolutionary gospel and since the war as an objective basis of order. Right is neither natural nor private, neither objective nor subjective. It is all of these, in a sense; but primarily it is a measure or means of collective confidence. As such, law is a substitute for religion; it is the organized faith of men in each other.

H. W. S.

Fascismo Universale. GASTONE SILVANO SPINETTI. (Quaderni di Studi sul Fascismo.) Roma: La Sapienza. 1933. 57 pp.

It may interest philosophers to know that there are numerous romantic attempts among the younger Italian fascists to manufacture a fascist philosophy. The nationalistic idealism of Gentile and his school, which has served hitherto as the only philosophical adjunct of fascism worth consideration, is being attacked by those enthusiasts who repudiate everything that has its roots beyond fascism. This pamphlet of editorials from *La Sapienza* is a typical attempt to formulate the basic ideas of the *nuovo clima spirituale*, an attempt to create out of whole cloth a "harmonious, integrated, omnicomprehensive, universal vision of all phenomena expounded in clear and unequivocal terms, with illustrations but without any humbug of research and erudition." This implies a new theory of nature, of human nature, of individuality, of struggle, and of the vanity of happiness. All this in less than fifty very slight pages, and apparently priceless.

H. W. S.

Character Education in Soviet Russia. WILLIAM CLARK TROW, editor. Foreword by George S. Counts. Translation by Paul D. Kalachov. Ann Arbor: Ann Arbor Press. 1934. 199 pp.

Five articles, edited and summarized by Professor Trow, afford an unusually direct insight into Soviet ideas and aims for extra-curricular education because they were translated from a series written for leaders of Pioneers (Children's Organization of Young

Pioneers in the Name of Lenin). Pioneers are the ten- to fifteen-year-old group of the youth-movement in Russia. Their program, which is independent of schools or other institutions, seeks to develop "fighters and builders of communism" by methods and activities examined in detail in the articles.

Throughout the book, primary emphasis is laid on the importance of class-consciousness. Moral qualities are related to it; participation in productive labor is, of course, vital to it. The enlisting of children for a share of active work in factory and field, for such purposes as collecting raw materials, warring on kulaks, and helping to "liquidate illiteracy" contrasts sharply with our ideas of an environment conditioned for the child. Although self-activity with its Deweyan implications for education is stressed and leaders are expected not to foster dependence but to be "teacher-organizers of self-activity," the form of this activity is closely tied to class-consciousness and the basic needs of the communist state. It is perhaps unfair to draw general conclusions in the light and side-light of this single though unusually direct medium of information, through which something akin to eavesdropping on a discussion of family affairs is permitted. The impression of a premium on aggressiveness, channeled though it be to common rather than individual ends, seems to the reviewer to pervade these articles. It would be interesting to know if the relations between individual children, between parents and children, and other phases of character education are treated in other articles.

R. A. F.

OTHER NEW BOOKS AND JOURNALS

- CRITERION. Any IX, Num. 34. L'intellectualisme en la filosofia; *Joan Corts Peyret*. Les dues deus de la moral i de la religió segons Bergson: *Basili de Rubí*. El pensament i la imatge: *Joan Manyá*.
- SCIENTIA. Vol. LIV, N. CCLIX-11. Zur Philosophie der Wissenschaftsgeschichte: *E. Radl*. The Temperatures of the Stars: *W. N. H. Greaves*. La question philosophique et scientifique de l'intelligence animale: *M. Thomas*. Su i problemi e i processi dell'etnogenesi: *E. De Michelis*. (N. CCLX-12) L'infinito nella storia del pensiero: *F. Enriques*. Materie und Raumerfüllung: *M. v. Laue*. Problèmes de spécificité dans le phénomènes de fermentation: *M. Schoen*. La nueva psicología espiritual: *H. Delgado*. Theories of Social Determinism: *Sidney Hook*. (N. CCLVIII-3) Zur Entstehung des wissenschaftlichen Begriffes in der griechischen Philosophie: *J. Stenzel*. Quelques considerations sur les notions d'onde et de corpuscule: *M. et L. de Broglie*. Il noto di rotazione delle stelle: *M.*

Maggini. Muscle Contractures and their Physiological Significance:

F. Bottazzi. Psycho-Analysis and Folk Lore: *E. Jones.*

THE NEW HUMANIST, Volume VII, Number 2, contains an article on "Nature and Naturalism" by *Roy W. Sellars.*

Ferrière, A.: Der Primat des Geistes als Grundlage einer aufbauenden Erziehung. Berlin-Leipzig: Julius Beltz. 1934. viii + 260 pp. 7.50 M. (A German translation of *Le Progrès Spirituel*, Geneva: Editions Forum, 1927.)

NOTES AND NEWS

We print below the program of the Thirty-fifth Annual Meeting of the Western Division of the American Philosophical Association to be held at Indiana University, March 29 to 31, 1934.

THURSDAY, MARCH 29

2:30 P.M.

Physics, Metaphysics, and Theology *Herbert Martin*

Method in Philosophy *Carroll D. W. Hildebrand*

Beauty, Definability, and Analysis *Lionel Ruby*

8:00 P.M. Annual Smoker

Welcome, by President W. L. Bryan, of Indiana University

Preview of the Prague Symposium on Social Science—Normative or Descriptive *T. V. Smith*

FRIDAY, MARCH 30

9:30 A.M.

Symposium: "Ethics of International Relations"

J. A. Leighton, Harold B. Lasswell, Fowler V. Harper, F. C. Sharp

2:30 P.M.

Some Comments on Logical Positivism *Roy Wood Sellars*

Knowledge by Fiat *Eleanor Bisbee*

Émile Meyerson and the Epistemological Paradox. *Thomas R. Kelly*

7:00 P.M. Annal Dinner

Presidential Address: "The Subjective Mind and Society"

J. D. Stoops

SATURDAY, MARCH 31

9:00 A.M.

What is Wrong with Current Systems of Symbolic Logic?

David F. Swenson

An Objective Probabilism—A Criticism *Homer H. Dubs*

On the Nature of Reference *P. B. Rice*

The Spatial Location of Sense *Horace S. Fries*

The Twenty-ninth Annual Meeting of the Southern Society for Philosophy and Psychology will be held at Birmingham-Southern College, March 30 and 31, 1934. The program for the Philosophy sessions is as follows:

FRIDAY, MARCH 30

9:30 A.M.

The Logic of Reality *Charles A. S. Dwight*The Great Analogy in Idealism *Leroy E. Loemker*Logic and Functionalism *Peter A. Carmichael*The Constancy of Human Values *W. Preston Warren*The German Church and Liberalism *Fritz Marti*

2:00 P.M.

Measurement in Plato's Republic *Lewis M. Hammond*

The Metaphysical Postulates of Mediaeval Aesthetics

*Katherine Gilbert*A Basis for Modern Ethics *Anna Forbes Liddell*Ethical Relativity *Marjorie S. Harris*

SATURDAY, MARCH 31

9:00 A.M. Joint Session

The Undergraduate Curriculum in Psychology *P. F. Finner*Thought as Awareness and Thought as Behavior... *Marten ten Hoor*Modern Nerve-Physiology and Descartes' Doctrine of the Productions of Bodily Movement *H. M. Johnson*St. Thomas and the Establishment of Modern Science... *A. G. A. Balz*The Problem of Psychic Reality *Herbert C. Sanborn*

2:00 P.M.

Round-Table Discussion of the Teaching of Philosophy in Colleges

Dr. Archibald Alan Bowman, professor of moral philosophy at Glasgow and former chairman of the Department of Philosophy at Princeton University, returned to Princeton on March 21, 22, and 23, to give a series of lectures on the Louis Clark Vanuxem Foundation. The general subject was "A Sacramental Universe."

THE JOURNAL OF PHILOSOPHY

There is no similar journal in the field of scientific philosophy. It is issued fortnightly and permits the quick publication of short contributions, prompt reviews, and timely discussions. The contents of the last six issues are as follows:

Volume XXXI. No. 1. January 4, 1934.

The Conception of Derivation in Epistemology. RAPHAEL DEMOS.
The Universe of Light. FREDERICK J. E. WOODBRIDGE.
Book Reviews. Journals and New Books. Notes and News.

Volume XXXI. No. 2. January 18, 1934.

Perspectivity and Objectivity. PAUL L. DELARGY.
Objectivity of Esthetic Value. CARROLL C. PRATT.
Book Reviews. Journals and New Books. Notes and News.

Volume XXXI. No. 3. February 1, 1934.

On the Attributes of Material Things. C. J. DUCASSE.
Appearance and Orientation. GRACE A. DE LAGUNA.
Book Reviews. Journals and New Books. Notes and News.

Volume XXXI. No. 4. February 15, 1934.

The Metaphysical Basis of Induction. GEORGE TODD KALIF.
Report of the Thirty-Third Annual Meeting of the Eastern Division
of the American Philosophical Association. JESSE V. MAUZERY.
Book Reviews. Journals and New Books. Notes and News.

Volume XXXI. No. 5. March 1, 1934.

New Epistemological Method. VIRGIL C. ALDRICH.
Report of the Tenth Annual Meeting of the Pacific Division of the
American Philosophical Association. DONALD A. PIATT.
Book Reviews. Journals and New Books. Notes and News.

Volume XXXI. No. 6. March 15, 1934.

Verifiability, Truth, and Verification. ERNEST NAGEL.
Neo-Classicism, Platonism, and Romanticism. PAUL GOODMAN.
Book Reviews. Journals and New Books. Notes and News.

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The Book of Diogenes Laertius. Its Spirit and Its Method by Richard Hope. (Columbia University Press, 1930.) xiv + 241 pp. \$3.50.

Telesio, The First of the Moderns by Neil C. Van Deusen. 90 pp. (paper cover) 75 cents.

Montaigne's Philosophy of Human Nature by J. V. Mauzey. 98 pp. \$1.00.

English Space and Time Theories from Henry More to Bishop Berkeley by John Tull Baker. 90 pp. (paper cover) 75 cents.

The Growth of Bradley's Logic by Rudolph Kagey. 131 pp. (paper cover) 75 cents.

On the Logic of Measurement by Ernest Nagel. 91 pp. (paper cover) 75 cents.

Responsibility. Its Development through Punishment and Reward by Laurence Sears. (Columbia University Press, 1932.) ix + 198 pp. \$2.50.

Value Theory and Criticism by Orlie Pell. 81 pp. 75 cents.

Realistic Ethics by Annette T. Rubinstein. 137 pp. \$1.50.

IN PRESS

Studies in the History of Ideas. Vol. III. Edited by the Department of Philosophy of Columbia University. (Columbia University Press.) 500 pp. \$3.50. Contents: John Dewey: *An Empirical Survey of Empiricisms*; M. T. McClure: *Greek Genius and Race Mixture*; Richard McKeon: *Renaissance and Method in Philosophy*; A. G. A. Balz: *Cartesian Doctrine and the Animal Soul*; S. P. Lamprecht: *The Role of Descartes in Seventeenth Century England*; F. J. E. Woodbridge: *Locke's Essay*; Howard Selsam: *Spinoza; Art and the Geometric Method*; J. T. Baker: *The Emergence of Space and Time in English Philosophy*; Rudolf Kagey: *Coleridge*; Sidney Hook: *Hegel and Marx*; H. W. Schneider: *Mill's Methods and Formal Logic*; Ernest Nagel: *Impossible Numbers; a Chapter in the History of Modern Logic*; Gail Kennedy: *The Pragmatic Naturalism of Chauncey Wright*.

Aristotle's Theory of the Infinite by A. Edel.

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THE JOURNAL OF PHILOSOPHY

PROFESSOR PRATT ON SPECULATIVE PHILOSOPHY

IF I understand him aright, one term which gives Professor Pratt much trouble is experience. At any rate I can best serve my own purposes by indicating how experience is construed by speculative philosophy.

Just as life for the biologist is a general term involving a multitude of characteristic activities such as digestion, reproduction, and the like, so experience is construed to involve, or to be made up of, any number of specifically human activities, such as knowing, esthetic enjoyment, and religious worship. And both sets of activities—the biological and the human—presuppose organizations capable of carrying them out and a material upon which to exercise themselves. Digestion, for example, is an activity carried on by living things, upon a material taken from the environment and designated, in so far as it participates in the activity, as food. Just so, knowing is a human activity, carried on by beings capable of conscious experience, upon a material “had”—as Mr. Dewey would put it—from the real world and designated, in so far as it participates in the activity, as the object of knowledge. Just as food, whatever else it may be, must be digestible, so the object of knowledge, whatever else it may be, must be knowable. (Of course there are strict limitations to the working of the illustrative analogy here employed.) So far, I gather from Professor Pratt’s discussion, critical realism would in principle agree.

But the next stages in the argument he would, I take it, refuse to follow, though they seem, to the speculative philosopher at least, to be bound up with the preceding.

From the preceding it is clear, at any rate to the speculative philosopher, that experience comprises two equally necessary aspects, the subjective and the objective, and that accordingly it may be called a synthesis, totality, whole, or unity of these aspects. And just because the duality is one of aspects, is within the whole, that is, dualism (*pace* Mr. Lovejoy!) can not be ultimate.

Now any whole implies or involves a principle (or principles) of organization. So one speaks of the principles of mechanics, or the principles of economics, or the “principle of individuality and value.” And to the principle of organization of the unity or whole which is experience philosophers since Plato have given the name

of mind. It is in a sense derivative from this that one speaks of "the social mind," "*l'esprit positif*," "the scientific mind," "the spirit of 76," or "college spirit." Similarly, by the mind of an individual is meant the principle of organization of his experience—which, as above explained, always involves conscious activities directed upon objects. By "absolute mind," then, one should mean simply the ultimate principle of organization of an experience conceived of as ideally complete (Bradley's "reality"); while the "nisus towards totality" of which Bosanquet, for example, speaks, describes the philosophical impulse and endeavor to understand the world as adequately as possible. It is exemplified by the man naturally desirous of knowledge of Aristotle.

On this view, obviously, mind is not, as it is for many other views, some sort of existential entity or psychical stuff. Instead of asking how my mind, an entity supposedly locked up within my head, can know another entity externally related to it (note the spatial metaphor indulged in here)—the classical epistemological problem—the speculative philosopher regards the process of knowing objectively, much as the biologist does the process of living, and analyzes it from this point of view.

As growing bodies of knowledge, the sciences reveal this process in typical forms, so that it is possible to characterize the nature of judgment, deduction, and induction, and to determine the part played by each in the process as a whole. At the same time one also learns in terms of what categories—e.g., substance, causality, teleology—the various sciences construe the various portions of the real world. In short, as Bosanquet was fond of putting it, we develop both a "physiology" and a "morphology" of knowledge. In so doing we are discovering how the principle of organization called mind displays itself in its various contexts.

These are respectively logical and metaphysical investigations. From these are to be distinguished the psychological approach to the knowing process. Just as certain biological sciences examine the several vital activities such as digestion, reproduction, and the like, so psychology investigates the several conscious activities, such as perception, memory, and the like—in short, the subjective aspects of knowing. And there is no more reason why the psychologist should postulate a dualism between mind and body, than there is why the biologist should postulate a dualism between life and body. Neither is there any more reason why he should talk about "mind-stuff" than there is why the biologist should talk about a vital stuff. Entities are not to be multiplied beyond necessity!

From this point of view the so-called epistemological problem appears as a sort of hybrid, a monster, a mongrel, a scapegoat, born of an unholy confusion of psychological and logical categories. How

incapable of solution this problem is may be seen from an attempt to frame an analogous problem for biology, e.g., "how can life, regarded as an entity, digest food?" Organisms digest food, and conscious beings know.

I rest assured that Professor Pratt is far from satisfied with my attempt at clarification. God forbid that he should be entirely convinced, for in that case idealism would have lost an ideal adversary!

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ONCE MORE UNTO THE BREACH!

HAVING freed my mind in this JOURNAL, at perhaps undue length, on the subject of idealism, I had retired from the field of conflict (pardon the mixture of metaphors) to a somewhat satisfied repose, when I was awakened from my dogmatic slumbers by a request that I participate in the Symposium at the Amherst meeting of the Philosophical Association; and I have now been reawakened by the receipt of a large envelope containing the four papers by Professors Wilson, Barrett, Moore, and Smart, which have appeared in the preceding and the present numbers of the JOURNAL, accompanied by the suggestion from the Editors that I send them my Symposium paper, with such additions, subtractions, and emendations as the emergency seems to call for. I use the word *emergency*, let me add, advisedly. The Symposium turned out to be a kind of triangular battle between idealism, objective relativism, and realism. In the course of the discussion it transpired that I had not destroyed idealism. And now with the newly augmented forces of idealism at my gates, and the objective relativists on my flank, the situation is sufficiently serious. Plainly I must look to my defences.

The subject given out for the Amherst Symposium was "The Status of Mind in Reality." Rather fortunately no one paid much attention to it. *Pro forma* I made a few remarks about mind in reality, but they were so unimportant I shall not reproduce them here; instead I shall devote myself to the crucial questions as to the meaning of the term "mind," and the general positions of dualistic realism, objective relativism, and speculative idealism. And first of all let me make it clear in what sense I shall use the word "mind."

The philosophical use of any term of common speech should, it seems to me, conform as far as it can without vagueness and ambiguity, to the best usage of the language. If we are to follow this principle we surely must recognize that the word "mind" has an essentially subjective meaning. The best usage both literary and

psychological, as well as the common usage of the man in the street, employs the word to refer either to the actual stream of consciousness or psychic content of some individual, or to the psychical powers, potentialities, and abilities of an individual, or to an individual self or subject. The individual or subject in question need not be human. One may properly refer to the animal mind, or to the divine mind. But in both cases the word "mind" gets its meaning for us from our minds, and is properly transferred to beast and God only in so far as its subjective, conscious, individual characters are preserved. Any of the three uses referred to (subject, stream of consciousness, or psychic potentiality) would seem to be justified, and any extension of the term beyond these subjective and individualistic limits would seem to me both a bad use of English, and an unnecessary and dangerous bid for ambiguity.

I wish, therefore, to take this opportunity to voice an earnest protest against the custom so common among certain idealistic schools, of using the word "mind" or "spirit" to refer to a region of reality which only by a rather fanciful analogy can be said to have anything in common with individual thinkers and their psychical powers, processes, and experiences. This new departure in the use of the word "mind" inaugurated by Hegel in his treatment of *Der objective Geist*, and also in his reference to Nature as in some sense Mind, seems to me one of the most harmful things that a philosopher has ever done to philosophy. Exact thinking and a careful use of terms is an absolute prerequisite to any form of philosophical progress; if our philosophical vocabulary is to be determined by vague analogies, the game is up. It is doubtless true that human institutions and social customs, that morality and law and religion, are all in part products of human thinking and experience; it is also true that everything in nature is an actual or possible object of thought; and it is further true that the fundamental logical principles of human thought must be recognized as also fundamental to Nature, and that both mind and everything else are ordered. But I submit that none of these facts, nor all of them together, justify us in taking a fairly definite and much-needed word like *mind* and giving it the extension here in question. There is no good reason why either the product or the object of mind should be confused with mind; nor is there any good reason why two types of process which conform to certain very general common laws should be mixed together into one vague and undifferentiated whole by giving the name of one of them indifferently to both. I am at times wicked enough to wonder whether it is not out of the vagueness of thought thus generated that some of the seeming triumphs of objective idealism have been born. As if the

haze in which much philosophic discussion has been veiled were not dense enough already, additional and unnecessary befogging has been brought about by several schools through an equally "large and loose," generous and indefinite use of the words "self" and "experience." Against all of these methods of making us think we are talking about things we are not talking about, the dualistic realist enters an earnest protest. For him, at any rate, *mind* is going to mean a subjective and individual affair. When he needs to refer to other things he will try to find other terms.

It will perhaps prevent unnecessary misunderstandings later on if I say here a few words concerning the relation of my position to that of objective relativism. I am in full agreement with both the objective relativist and the idealist in their common and reiterated and important assertion that everything is related to everything else. Further than that, I agree with them that everything is characterized by its relations. I am not as yet ready to go the whole distance with them in their belief that things have no other characters than those they get from their relations; but I agree that at any rate most of their characters, and many of their most important ones, are of this relational sort. I recognize also that some of the characters of things they derive from their relations to minds, and these characters are perfectly real. If a circular sheet of what we should commonly call white paper looks to me elliptical and blue when I see it from a certain angle and through blue glasses, then appearing blue and elliptical to me is at that moment one of its real characters. On these matters all three of the schools involved in the Symposium would seem to be in accord.

The quality of blue which I see when I look at white paper through blue glasses I should call subjective, while Professor Murphy would call it objective. Hence it may be that from this point on we shall have to go our different ways. Yet 'tis sad to part, and I should prefer to stay with Professor Murphy as long as possible. Let us then say, tentatively, that the blue of the illustration might be called a character of the paper in the sense that, under the conditions stated, the paper was one of the causes that produced the blue datum, one of the set of circumstances without which it would not have come into being. This blue, we both agree, the paper owes to its relation to me who see it—and, of course, to the blue glasses and the light rays. Similarly, its whiteness, as seen by the normal eye, it owes to its relation to the perceiver. "Secondary and tertiary qualities," according to Professor Murphy, "seem to occur only in reference to human beings."¹ Now the human race has always found it of great practical importance to distinguish between those

¹ *Ideas and Nature*, Univ. of California Publications, VIII, p. 212.

characters of a physical thing which it owes to its relations to other physical things and those which it owes to perceivers; and it has been for a long time customary to call these latter characters *subjective*. Dualistic realism concurs in this distinction and in this use of terms. Objective relativism, on the other hand, insists that the characters in question should be called *objective*. The principal arguments that I have read from the objective relativists to prove these characters objective, would seem to me to show merely that they are actual. It often looks, therefore, as if the chief contention of the objective relativist consisted in the assertion of the actuality of the characters that are commonly called subjective. It was in the hope that this might be the meaning of his contention that I have made a desperate effort to go all the way with him. For if all he have in mind be a new and decidedly ambiguous use of an old term, I shall not quarrel.

I fear, however, that though the arguments of the objective relativist prove only the *actuality* of what most of us call the subjective, he really means that these subjective events which admittedly owe their characters and their existence to perception, belong not to consciousness but to external objects, and that they exist in the common objective space. This theory, which puts into physical space (already chock full of other things) innumerable non-physical events, events that come into being and go out of it as we open and close our eyes, events and qualities which take no part in the causal sequences of the physical world and which physical science can not recognize—this theory, if taken at its face value, I am quite unable to accept. Yet let me make one more last desperate attempt at agreement. I shall not part company with the objective relativist if he really has nothing more in mind than a rather paradoxical way of stating the fact that when I look through blue glasses at a piece of paper it looks blue to me; that from the point of view of a man on this side of a mirror, his body looks as if it were on the other side of the mirror. This may be all that is intended by the very elaborate statements and arguments of Professor Whitehead and objective relativism. If so I should call their language queer, but neither I nor anybody else could or would deny the exceedingly obvious facts which they have, rather unnecessarily, brought to our attention. I suppose, however, that they really mean something truly radical, namely, the denial of consciousness. This position probably is a kind of pan-objectivism not unlike that of neo-realism. If this is their real position I must indeed part company with them. Mind as a realm of the subjective exists, and *sensa*, ideas, memory images, imagination, consciousness of meaning, emotions, will-acts, belong to it, and only in a Pick-

wickian sense are they to be attributed to the physical. And I take this opportunity of affirming my agreement with Professor Hendel when he says that "mind is a very distinctive reality, distinct from anything else in what we call Nature." There is no time here to argue this matter, but I shall devote a few minutes to making more clear my position as to the development of mind and the nature of its knowing.

First of all let us suppose a real and common space-time. This supposition need not commit us to taking sides in the controversy over the nature of space and time. Space may be considered in Newtonian fashion as a container; or it may be thought of as a name for the fact that physical things have length, breadth, thickness, shape, and size, and that they are related to each other in ways describable as distances and directions. Either view of space is compatible with the general realistic hypothesis; and the same is true of time. Let us now suppose that in the time-space pattern or order there are existent collections of existent qualities, each such collection having its own unique locus in both time and space. These collections of qualities (which we commonly refer to as things) are not dependent for their *existence* on any mind, and while some of their *characters* may be dependent on mind, others of them are not. Whether or no one accepts this essentially human hypothesis, it certainly contains nothing that is meaningless, nothing that is self-contradictory, nothing that is illogical. These physical things, as thus understood, we shall now add, are dynamically or causally interrelated. Further, let us suppose that among these interrelated physical things some are living and conscious—an hypothesis which can hardly be called irrational and for which surely there is fair, empirical evidence. Some of the activities of the non-sentient things, some of the events and processes that go on among them, will affect sentient beings for good, some for ill: some will act upon them lethally, some will be the very condition of their continued life. In such a situation those beings which are capable of noting the advantageous and disadvantageous processes and events and are able to coördinate their actions accordingly, will survive, while the others will be likely to die in their youth and innocence. Thus, given sentient beings and some capability, within living forms, of variation, natural selection will develop the power of nicer and nicer perception—as well as the various instincts, thought, and the other mental endowments of beast and man. Among these mental endowments should be mentioned the consciousness of meaning and those desires and preferences, likes and dislikes, on the basis of which some things are said to have value and to be more valuable than others. But to return to perception, we must note at this

point the kind of perception which natural selection will produce. Sentient beings will be developed to perceive only those qualities of things and those types of events which have vital and lethal effects upon them. Hence it will come about that man and his animal brothers will be able to perceive such things as structure, process, sequence, order; but not the many qualities of the physical thing's inner nature, so to speak, which have no decisive effect upon the furthering or discontinuance of life. It will thus come about that *sensa* and other (subjective) experiences will be developed in the human and animal minds which will stand for or symbolize certain external events. There is no reason, biological or other, why these symbolic experiences should resemble the events which they symbolize. Man simply receives certain stimuli and data, and responds to these partly by immediate movement, partly by forming judgments. These judgments are about the structure and processes of the external objects. When these judgments are true, and we have reason to believe them true, we have knowledge.

For the dualistic realist knowledge is therefore representative. It is what Plato calls it: "true opinion with reason." And this brings up Professor Murphy's request that "some self-assured realist should tackle the problem of relating his independent fact or object, which ought to be the measure of truth, to the actual and accessible criteria by means of which we do in fact test opinions and beliefs." My personal answer has been in principle given in what I have just said. In ordinary practical life we do not doubt our perceptual and other judgments concerning the physical world. When doubt arises we use, as Professor Murphy says, criteria for testing our belief. What these criteria are he does not state, but I suppose we should all agree that what we do is not in principle different from what the scientist does in a similar situation. We form hypotheses and watch to see whether later experience confirms them. Professor Murphy's question then seems to be this: how are these hypotheses and the testing experiences related to the "independent" facts or objects concerning which we have formed judgments? In the first place let me point out that these facts and objects are no more independent for dualistic realism than they are for objective relativism. For both schools the facts and our criteria are closely related; but for both the facts and objects are independent in the sense that they do not owe their existence to perception or any other act of mind. Nature has so made us that our *sensa* are linked up with external events in such fashion that they represent or symbolize them. Sometimes we are mistaken; but a large proportion of our judgments concerning the processes and structure of the physical world is borne out by subsequent experi-

ence in the sense that by making use of these judgments we are able to predict. This does not do away with the theoretical possibility that we may be mistaken. Realism does not pretend to give us a theory on the basis of which we shall have absolutely certain knowledge about physical processes. Absolutely certain knowledge is not to be found outside of mathematics and pure logic. But is not a world over which there ever hovers the shadow of a possible theoretical doubt exactly the kind of world we seem to be living in? Realism makes possible quite as much certainty as we have any reason to suppose we possess. Nor is there, so far as I am aware, any theory which makes our knowledge of physical things absolutely certain. If there be such a theory, at any rate it is not objective relativism. For it, as for dualism, there is at any rate a part or aspect of the physical object—namely, the very part which is of practical importance to us and the only part of which physical science takes cognizance,—which is not created nor destroyed by its relation to perception, and therefore is known if at all only by representation. So far as I can see nothing whatever has been said to make our knowledge of this important aspect of the physical world any easier by insisting that, for another aspect of the physical, the word “objective” should be substituted for the word “subjective.”

The central point of the realistic position consists in the assertion that the physical is not dependent for its existence on mind. Realists are opposed to each other on many subordinate points, but on this fundamental tenet all realists from Locke's time to our own would unite. I can not, therefore, assent to the not uncommon assertion that realism is as much in need of definition as idealism and that the various realistic schools are agreed on no proposition except that idealism is false. Throughout the three hundred and fifty years of its history realism has steadily maintained, as its central proposition, that physical reality, though related to sentient beings, is not dependent upon mind for its existence and for most of its nature; that while sentient beings may perceive and think about physical things, these things can and do exist and for ages have existed unperceived and unthought of, and that human experience would be an inexplicable mass of seemingly unrelated events and mysterious coincidences unless we could have recourse to our natural belief in the physical world or to some equivalent hypothesis.

And now for a few valedictory remarks on idealism. The volume on *Contemporary Idealism in America*, together with the articles in this JOURNAL which grew out of it, the discussion at Amherst, and the four papers in this and the preceding numbers of the

JOURNAL, have made it abundantly clear that the philosophers who call themselves idealists are divisible into two chief sub-sections, namely, the mentalists and those who reject mentalism. The clear marking of this distinction has been a genuine forward step in our mutual understanding and in the clarification of our issues. Many of us realists had been under the impression that all idealists were mentalists; and we now see the error of our ways. Of the two schools of idealists we understand the mentalists best. Their general position has always been fairly plain, and at the recent Symposium Professor Brightman gave a clarifying statement as to the reasons which lead them to their conclusion. No longer does the mentalist maintain that his form of idealism is the only logically tenable or meaningful form of philosophy. Instead he takes the humbler position (quite parallel to that of the dualist) that while there are several conceivable interpretations of reality, his is, on the whole, the most plausible, the one that makes the smallest draft on human credulity.

One of the idealist papers in the preceding number of the JOURNAL (pp. 179-184) is written from this mentalist (i.e., personalist) point of view. It is a pleasure to find that I can go a long way with Professor Wilson. I share his belief in human selves. I agree with him that the concepts by the aid of which we think about the real world are the product of the mind's reaction upon sense data. I welcome his assertion that there is an external control over our sense-perception, and that the source of this control is cosmic in its extent. Beyond that I can not as yet go with Professor Wilson, though I understand what he means and I acknowledge that it *may* be true. I see no compelling reasons for supposing that the "cosmic power, which is the source of control in sense perception, knows at all times what it is doing"; in short, that it is a Self. Professor Wilson may be right, but I do not see how he can feel so sure of it.

One further point in Professor Wilson's paper should here be mentioned. He appears to think that we realists are willing to go further toward idealism than is actually the case. For he says that our "*Realen* so far as known are thought-constructs." I take it that it was not Professor Wilson's intention here merely to point out that things which are known are known things. That, or the equivalent of that, has been announced by idealists so many times in the last century and a half that I can hardly think Professor Wilson means to repeat it once more. He must, therefore, mean that the realist agrees with the idealist in acknowledging that there is nothing else to intend as an object of reference than thought-constructs. Of course the realist will acknowledge no such thing. The word "object" here must not mislead us. The distinction,

used by Broad and others, between the epistemological and the ontological object is important in this connection. Only a solipsist could consistently maintain that it is impossible to refer to, mean, or believe in a hypothetical ontological entity or object unless that entity be identified with one's epistemological object. Nor are realists greatly moved by the consideration that they "can have other forms of the real [besides thought-constructs] only by refusing to tell what they are." In previous pages of this paper I think I have told what they are. These physical things which are not thought-constructs are conceived as existent collections of existent qualities, with specific loci in space-time, part of whose structure, order, and processes we have made out. I admit that we can not tell *all* that these physical entities are. Can Professor Wilson tell us all about his Cosmic Self which "knows at all times what it is doing"? If we are to believe that it is impossible to say anything meaningful about a hypothetical entity unless we tell *everything* about it, then it will be equally impossible for realist and idealist, for scientist and philosopher, for historian and business man to say anything. Surely it is not by such all-or-nothing method that progress is made. Line upon line!

The three other idealist replies to my papers are from the school I had referred to as speculative idealism—though two of the writers prefer the name "objective idealism" and the other "speculative philosophy." The most elaborate of these three is that by Professor Barrett which appeared in the preceding issue of the Journal (pp. 169-178). It is the kind of paper which I heartily welcome—a paper in which the controversial element is reduced to the minimum and the main stress is placed upon an earnest effort to coöperate in our common problem of getting at the truth. I go farther with Professor Barrett, moreover, than he may suspect, for the naturalistic interpretation of the world which he attacks certainly does not satisfy me. It would be a pleasure to dwell upon the many points of agreement between us; but it seems to be the sorry fate of philosophers to be forced by some kind of inner dialectic to dwell chiefly upon their differences. And many small matters of disagreement I find in reading Professor Barrett's paper. Of these, however, I shall say nothing, but shall confine myself here to two questions which are central to the present discussion. The first is the old verbal question of the word "mind." And here I shall merely register once more a protest against the use of the same word to mean two such different things as the self or the mental processes of John Doe, on the one hand, and, on the other, the unified order of the whole, the structural principles of the universe, a kind of arrangement of a realm which is acknowledged not to be conscious.

It seems to me only in the service of ambiguity that two meanings so different should be expressed by the same word. Would we not all be much less likely to misunderstand each other if we should give up the word "mind" altogether and say *personal consciousness* when we mean it, and *some kind of order* (the kind not specified) when we mean that; and further point out, if we like, that all things, personal consciousness included, possess some kind of order?

But this is a verbal matter chiefly—though a verbal matter that leads into many actual philosophic disagreements. More important is the position of objective idealism as presented by Professor Barrett on the nature of reality. With this position I must still say that I can neither agree nor disagree because I frankly do not yet know what it is. This much progress we have made: the position is not mentalism nor any form of absolute idealism which would attribute conscious mind to the Absolute. It would seem also that we can go a step farther: objective idealism does not stand for an *a priori* view of the world, for a necessary logical structure capable of being deduced from the Principle of Contradiction. Professor Barrett seemingly will go a long way with us realists in admitting a large empirical element into philosophy. This is much; but it is not all. Some of us realists will be willing at this point to take at least tentatively another step with Professor Barrett; the world is in part characterized by the fact that it produces individual minds, meanings, and values. How far the world is characterized by this fact, and just how significant for the whole of things this fact should be considered, is a question upon which much discussion is needed. As Professor Murphy pointed out in the Symposium, we have yet to learn how idealism will deal with the many non-idealistic facts of the world, and how it will reconcile them with its seemingly hasty generalization that reality is "mind." For its argument, be it remembered, is in part empirical.

But let us, for the time, forget these difficulties in proof, and fasten our attention upon the theses of objective idealism, however demonstrated. This world is the sort of world that (1) has produced knowing selves, and (2) is capable of being in part known. Let me point out, incidentally, that the assertion of this situation is hardly equivalent, in the ordinary usages of language, to the assertion that the world is mind. It goes, in fact, hardly beyond the position of Mr. Smuts and his philosophy of holism. Is holism what objective idealism is driving at? I gather that it would go beyond holism. And I have often wondered how Mr. Smuts could stop where he stops. For objective idealism, at any rate, not only is it true that the Universe is characterized by the fact that it has produced selves and values; it is also true, for it, that values are some-

how determinative and dynamic. This, of course, means that there are purposes, cosmic purposes in the world, and that these are efficient. They are not simply forms of ordered sequence which we observers can trace and which may be called "mind" because "mind" has been defined as order. Such an interpretation of value and purpose would be quite compatible with naturalism; and is, in fact, the interpretation which I understand Professor Hoernlé's form of objective idealism favors. Not so, if I understand him, Professor Barrett. He really means something actually different from naturalism. Purpose for him is purpose and is dynamic. What, then, does his form of objective idealism hold?

So far as I can see, there is nothing left for it to hold save this: that the Universe is either the creation of, or what we might call the body of, a divine Being which is a mind in my sense of the word "mind," a conscious being who loves values and has purposes and achieves them, and who (since mentalism has been rejected) is not an all-inclusive Absolute.

This is the view that I have meant, in my various papers, by theism. It has been worded in different ways by the Book of Genesis, by Plato, and by the Bhagavad Gita.⁶ Of course there have been many formulations of theism that have been crude; and perhaps it is natural that for this reason idealists should object to the word. But the essence of theism is, I think, what I have stated; and since objective idealism rejects both naturalism and mentalism, it would seem that theism as thus stated (or something like it) must be the thing that objective idealism means. The queer thing is that objective idealists do not say so. The position is easily statable and very obvious, and the non-mentalist arguments of idealism would seem to lead up to it. But most objective and speculative idealists, on reaching a point in their argument where the announcement of this theistic conclusion would seem almost inevitable, unaccountably shy off from it. I do not know why. One suggestion, which we ought not to entertain, is that they would not like to have it appear, after all the subtleties of their arguments, that this very old and somewhat commonplace conclusion was all they meant. I do not believe this is the real explanation. My own conclusion is that either the thing they mean is too subtle and complex for my poor realistic mind to comprehend; or else that they themselves are not quite sure what it is that they mean.

"The interpretations of poetry and art, of morality and religion . . . express something ultimate and real in the nature of the world." "The objective idealist assigns priority to mind. Finding mind to be the fullest and highest expression available to us of order in the world he insists on . . . seeking to understand the less

by the greater." I am not here objecting to the idealist's method of reaching his conclusion; I am merely trying to find out what that conclusion is. It does not mean an Absolute Consciousness. It does not mean merely the fact that the world produces minds. Does it mean what most of us know as theism? Objective idealism will not say. Does it mean something else, and if so, specifically what? Objective idealism refuses to answer. Or does it, perchance, mean that the objective idealist will be satisfied if we will all agree to call reality "*objective mind*" and not be too curious as to how this may be interpreted?

If objective idealism has something specific to give, it must furnish us with a characteristic thesis about the nature of the Universe, different in some respect from the well-recognized doctrines of the past; or else it must provide some new kind of argument in favor of one of these older views. To be very frank, I can not see that Professor Barrett has pointed out either of these prerequisites.

It is to the task of providing objective idealism with a unique thesis, which shall differentiate it from mentalism, naturalism, and theism, that Professor Moore directs himself (pp. 184-185). He points out a fourth possible way of taking reality and insists that this is the true interpretation of objective idealism. It is an interpretation which I confess I had not thought of as a serious hypothesis. But while I am glad to recognize in Professor Moore's reply an answer to my question "What is Speculative Idealism?", I must point out that if his view is accepted, certain peculiar results emerge. While the mentalist "thinks of all reality as *contained in* some mind," the objective idealist "only thinks of reality as always the *object of* some mind." He "sees the mind and its object as distinct and yet interdependent." Thus objective idealism is to be differentiated from mentalism. Physical things are not the content, but are always the object of mind. Now the peculiarity to which I referred is this: in Professor Moore's world physical objects are not mental, but they are dependent for their existence on the mental. In order to be and to continue in existence they must be the object of mind. I take it this means that they must be actually and actively thought about. It would hardly do to say they might be real when only potentially thought about, when only potential objects of some mind. If one should interpret the phrase "object of some mind" in this way it would be impossible to make any distinction between actual and potential reality, and the seemingly meaningful assertion of Professor Moore's objective idealism would in the last analysis reduce to the harmless truism that nothing genuinely inconceivable can be real. A position such as that would have nothing to differentiate it from the most extreme forms of realism and

naturalism. Physical things, then, in order to be at all, must be actually thought about, and they fall out of existence whenever they cease to be the actual objects of some mind. Nothing is said as to the nature of the needed mind. Professor Moore's objective idealism may appeal to an Absolute, or find finite human minds sufficient for this purpose. I am not sure which it will choose. If it chooses the former alternative it is important to note the kind of Absolute that will be required. Its Absolute must be very much more than the Bosanquetian "Absolute"; it must be a real and conscious Mind. An Absolute of this sort—explicitly aware all the time of all the names and all the numbers in all the telephone directories in the world and of every other fact, entity, or event in the universe—is a hypothetical Being of such extraordinary nature as to require rather compelling reasons if most of us are to accept it; and among these reasons, I should suppose, would have to be found the demonstration that the existence of physical entities is *inconceivable* except when some mind is thinking about them—a demonstration for which we realists have long been waiting. Moreover, there would seem to be not much more than a verbal difference between saying that physical things must be the *objects* of the Absolute Mind and that they must be its *content*. In a sense, to be sure, this form of objective idealism stops short of mentalism; but one wonders why it should.

If Professor Moore does not wish to risk his objective idealism on the fate of a hypothetical Absolute, and appeals only to finite human minds, the situation is hardly better. Since not even all mankind by ordered and strenuous efforts, by sitting up nights and thinking very hard, could possibly keep thinking of all the things all the time, the picture of the physical universe which results takes on that strangely incoherent and *jumpy* nature with which the older forms of subjectivism had familiarized us and from which objective idealism has often been proclaimed as the means of salvation. Physical objects being dependent for their existence on conscious awareness would appear to differ from psychical objects in little or in nothing save that they would be *known* as objective; and how they could be practically distinguished from purely subjective and psychical objects it is hard to see. When its reliance upon purely verbal differentiations are thus laid bare, objective idealism reveals an interesting family resemblance to objective relativism; while its pragmatic implications of a universal subjectivity suggest that it is an almost indistinguishable twin to mentalism.

The fourth of the idealist replies to my query, the one (pp. 197-199) by Professor Smart, will require more detailed consideration than I have given to any of the others. It centers chiefly round the

meaning given to the words "experience" and "mind." Professor Smart has been very careful to explain what each of these terms means to him, and I think I get his meaning; but these philosophic terms of ours are so deceitfully capable of concealing latent ambiguities that I can not be perfectly sure. It is just conceivable that he is using the word "experience" to mean what the dualistic realist means by it, namely, conscious states and conscious activities, such as sensa, emotions, urges, will acts, judgments. But I do not think this can be his meaning; for if it were, the word would require no explanation, nor could it be used as a way of getting out of dualism (which is plainly Professor Smart's aim in elaborating the meaning of the word). If experience be merely a synonym for consciousness (as we dualists use it), there are no two aspects about it, and it is merely one part of a dualistic world. It is, therefore, evident that Professor Smart uses the word "experience" to mean more than the psychical. It signifies to him the total situation, the sum total of the processes, both psychical and physical, which are involved when a man perceives, judges, feels, resolves. Taken thus, "experience comprises two equally necessary aspects, the subjective and the objective, and accordingly it may be called a synthesis, totality, whole, or unity of these aspects." Now of course such a series of processes, such an inclusive situation, may be *called* a whole, just as any combination of diverse parts may be called a whole, and from some point of view *is* a whole. This is a true saying, but for the purpose of our discussion it is not one of much significance. That Professor Smart means to assert more than a verbal unity is shown by his assertion that the duality is one of *aspects*, and that the dualism is not ultimate. A good deal hinges upon this word "aspects." Plainly it is used to mean something very different from *parts*. The implication is that every part of the total activity known as experiencing is wholly objective from one point of view and wholly subjective from another. To assert this, as I view the matter, goes far beyond the evidence; and not only so, but I can not help wondering whether, to one who is not at heart a mentalist, the assertion could really have any meaning. To make the question clearer, let us take a concrete case of experience and examine it. A man sees a red box. Some of the parts into which the total process or situation here involved may be analysed are these: a physical thing having a position in the common space; light vibrations or corpuscles; the processes going on in the retina, optic nerve, and brain; the sensation (psychical) of light, merged in the judgmental activity which might get itself expressed in the words, "That is a red box." Now I should hold that the first parts or stages of this total process had no subjective aspect, and that the

last had no objective aspect. If my analysis be correct there plainly results an ultimate dualism. If my analysis is not accepted by the speculative philosopher, what interpretation of the box, the vibrations, and the brain does he suggest in its place? Is the box mental? Is its *esse percipi*? Or what is it? No light is thrown upon the situation, nor is anything done to make the seeming dualism less ultimate by throwing over the whole series of physical, physiological, and psychological processes the blanket term "experience."

With this rather vague meaning for the word "experience" is bound up Professor Smart's use of the word "mind." As experience is for him the total process of activity, both psychical and physical, by which enjoyment, worship, knowledge, and many other things are reached, so mind is neither wholly psychical nor wholly physical, but is to be defined as "the principle of organization of the unity" of these various complex processes. Doubtless one has a right to define his own words as he likes, but from the purely linguistic point of view I do not see why any name is needed for such a conception. For I do not notice that any of the people who converse with me ever want to refer to the principle of organization of the unity of the various psychical and physiological activities, and of the physical processes outside the body that are connected with them when, say, I see a box. I can not myself exactly say what could be intended by such a "principle." Nor can I see that the nature of an individual mind is made more clear by calling it the principle of the organization of the totality of the personal and cosmic processes which are involved in all the individual's percepts, his knowledge, his esthetic enjoyment, his religious worship, and any number of his other specifically human activities. Professor Smart may rather naturally complain that I have not been quite fair to him in the preceding sentence, since in dealing with the mind of an individual he says explicitly that the individual's experience "involves *conscious* activities directed upon objects," and makes no reference (there) to the physiological and physical processes which I have included. If he should reply thus, however, I should have to remind him that the introduction of the non-conscious into "experience" was not my doing but his, and that I shall be the last to complain if he will really cast out from "experience" all but the conscious. I have merely taken him at his word in my phrasing of what an individual's mind comes to. And, to be brief, it seems to me that whether we are speaking of the finite individual or of the Absolute, the meaning given by speculative philosophy to the word "mind" is of such a sort as to leave confusion worse confounded. It throws light on nothing and makes unnecessarily and hopelessly ambiguous an otherwise fairly clear term.

So much said for the purpose of getting myself expressed, I can now return to Professor Smart and go along quite amicably with him. As he says, "*on this view*, obviously, mind is not some sort of existential entity or psychical stuff." And that being the case, I can also agree that a so-called problem which should seek the relation between "*mind*" *in this sense* and particular objects would be "a mongrel, a scapegoat," and also, if it will please Professor Smart, I am willing to add a unicorn, a Jabberwock, and an Unding. But the fact that there is no problem of relation between a brain process and the strange, abstract, and fantastic thing which Professor Smart calls mind, has nothing to do with the question whether the physiological psychologist has a real problem when he seeks the relation between the activity of the optic center and the occurrence of visual sensations. And be it noted that every psychologist who makes any use of the nervous system in describing or explaining psychical processes (and what psychologist save the behaviorist does not?) postulates some sort of dualism.

The problems of "the objective process of knowing," the growth of science, its differentiation into various subordinate bodies, the processes of judgment, deduction, induction, and the other things which interest the speculative philosopher—these are real problems. But from the fact that they are real problems it does not follow that they are the only real problems. Now the problem which various schools of realism—and some schools of idealism also—are perhaps most interested in is, not how "*mind*" (in Professor Smart's sense) can know (in fact for such a "*mind*" to know would seem obviously impossible); but "How can conscious beings know?" More specifically, how can an individual conscious being know some particular fact—any fact—about the external world? (I am using the word "*external*" to include all of reality that is not identically a part of the individual's conscious content.) The astronomer, let us say, is gaining knowledge of a distant star. The historian is accumulating knowledge concerning Cyrus the Great. Now what are the processes by which these scholars gain this knowledge, and what are the methods by which it should be tested? Since the speculative philosopher is not a mentalist, he agrees with us dualists that the star is not any part of the astronomer's consciousness, nor are Cyrus's acts any part of the consciousness of the historian. The thought of the star, however, and the thought of Cyrus, and the conclusions about them *are* parts of consciousness. The star, moreover, is millions of miles distant from the brain of the astronomer, and the events of Persian history were over thousands of years before the historian was born. The challenge of such situations surely can not be denied.

In short, the question how an individual can know objects which are not part of his conscious content is a real problem. The question as to the relation of a particular brain event to a particular sensation or conscious will-act is a real problem. Neither of them is solved or made in any way less pressing by a new definition of the words "mind" and "experience." And to admit the reality of these problems is to admit a very real sort of dualism.

Let us hear the conclusion of the whole matter. Is idealism realism? Some of it is not; a great deal of it is. What is the nature of the non-mentalist forms of idealism? Some of them are merely other names for thorough-going realistic naturalism; some of them are new ways of wording old-fashioned realistic theism. Is there some form of non-mentalist idealism which is not reducible to one of these? Has non-mentalist idealism any message of its own, anything characteristic that is more than words, any contribution (other than a verbal one) not given by either naturalism or theism? Perhaps. But after my long search and my many appeals for information, I have as yet failed to find it.

JAMES BISSETT PRATT.

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BOOK REVIEWS

An Introduction to Logic and Scientific Method. MORRIS R. COHEN and ERNEST NAGEL. New York: Harcourt, Brace & Co. 1934. Pp. xii + 467. \$2.75.

This book has more than a textbook value; no other work for beginners with which the reviewer is acquainted contains so much that is new, definite, relevant, and true. At least the present reviewer will not question its general truth, having himself expressed similar views in time past. It is to be hoped that future textbook writers will read and digest the exposure here of some of the timeworn but recurrent fallacies of logic texts. If there is a criticism of the book, it is just in this fact, that it is, and perhaps today must be, directed towards the enlightenment of teachers of logic, rather than towards the instruction of their pupils.

This is especially true of the formal logic section, dealing with such matters as "existential import." The ideal student text will be written by one who knows the theory, and is consistent, but does not try to explain too soon to the beginner. Most of the existent texts are inconsistent with themselves. We are thinking, for instance, of such a pedagogically effective text as that of Dotterer, which equates universal propositions with hypothetical propositions, and then calmly assumes you can still go on inferring factual exist-

ence from the truth of the universal. Why not be consistent, and add that, if we can infer a particular, with the meaning, "There is at least one," from a universal, any two universal premises with a term in common will give some conclusion? For instance: *No lumps of coal are negroes. No blackbirds are lumps of coal.* Therefore, *Some things not blackbirds are not negroes*, namely, the lumps of coal. But on the other hand, such a beautiful argument as the Pythagorean proof of the incommensurableness in the length of the diagonal of a square could find no place in our usual texts. *Any number y , which measures the diagonal length, when a number x measures the side, is even. It is also odd.* Do we conclude, in the third figure, that *Some even numbers are odd*? Certainly not. We conclude: *There are no such numbers.*

The most of the text before us is really good. There may be a little too much detail packed into some of the deductive logic chapters, and even some lack of caution, for one needs to watch existential import in inferences by added determinants, etc. The treatment of "analogy" is rather formidably technical. A "dilemma" might be more perspicuously explained as two ordinary hypothetical syllogisms set side by side as alternatives. The authors are so anxious to stress the weaknesses of Mill's methods, that criticism comes tumbling in before the ordinary student would have caught the meaning and force of the methods. On the other hand there are many things well explained: the nature of a mathematical system, Peirce's theory of probability, etc.

The reviewer wishes the authors had taken space, possibly in an appendix chapter, to explain to the first beginners how, given two premises of a syllogism, to go about constructing the valid conclusion, if any. This conclusion can then be compared with any given conclusion, to see if they mean the same. Then there should follow examples, many, many examples, actually worked out, so that the reader can have them before him. You can not do this in lectures without wasting a great amount of time, and the beginner never gets it so well as if he found it printed in his book. The rules would go something like this. Assuming the general interpretation of existential import which Cohen and Nagel assume, there can be no valid particular conclusion from two universal premises, and a statement about "honest men" will, in general, not be equivalent to a statement about "dishonest men." The rules then become very simple. There must be at least one universal premise for your major premise. In the first two figures, the subject of the minor premise, with its *all* or *some*, becomes subject of the conclusion, which is negative if one premise is negative (watching out for the troublesome ambiguity in *all—are not*). You can draw a dia-

gram of the major premise (stated in affirmative form, by obverting, if necessary). Of two concentric circles, the larger will indicate the predicate. The rule for the first figure becomes: "What is inside the smaller is inside the larger." For the second figure, "What is outside the larger is outside the smaller." These can then be shown to be equivalent to the two forms of the ordinary hypothetical syllogism.

Fourth figure that will not readily turn into first by interchanging premises, you turn into second figure. For instance, *No A is B*; and, *Some B is not C*. (Do not confuse the beginner by telling him that from two negative premises there is no conclusion.) Rewrite: *All A is non-B*; *Some not-C is B*, so it is outside of *non-B*. Therefore, *Some not-C is not A*.

The third figure should be treated differently. It is the refutation of a universal, by producing an example to the contrary. The primary rule is that the example must actually exist. Therefore normally one premise must be universal and one particular, or both individual. You form the conclusion with *some*, and bring down a negative with the term from each negative premise. Somebody asserts that *All the Presidents who were not Democrats came from north of the Mason-Dixon line*. You reply: "Consider Abraham Lincoln, he was not a Democrat, and he did not come from north of the line."

This review threatens to become too long, but we would like to take opportunity to express a regret that Professor Royce's diagrams of syllogisms have never found a place in a logic text. Starting with Cohen and Nagel's symbolism, that *No A is B* means $AB = 0$, and *Some A is B* means $AB \neq 0$, etc., you proceed as follows. Draw two overlapping circles to symbolize the major and minor terms, inside a rectangle indicating the universe of discourse. This gives four compartments. Split the rectangle and circles by a line lengthwise of the diagram, making eight compartments: those on one side of the line indicating the domain of the middle term; on the other side, its negative. Cross out by cross-hatching any area that a universal premise declares unoccupied. Indicate by the heads of two arrows the two compartments, at least one of which must be occupied if a particular premise is true. Imagine the middle line to disappear again, and read off the result. Such diagrams give the lecturer a chance to stress the "physical" necessity in these spatial forms, and to show that the laws of formal logic are laws of things and physical form, as well as of thoughts.

H. T. C.

The Nature of Mathematics. A Critical Survey. MAX BLACK. (International Library of Psychology, Philosophy, and Scientific Method.) New York: Harcourt, Brace and Company. London: Kegan Paul, Trench, Trubner & Co., Ltd. 1934. Pp. xiv + 219.

Those interested in the issues being disputed in the philosophy of mathematics, but who lack time or training to work their way through the flood of contemporary literature, will find in Mr. Black's book a useful outline of the positions and weaknesses of the chief combatants. The logistic thesis on the identity of logic and mathematics is rather fully developed and supplemented by short but intelligible accounts of the two main opposing schools. It is the only book in English which reports the present state of this exciting portion of the contemporary philosophic battleground.

Mr. Black finds that the logistic thesis has broken down. He points out very justly that the *Principia* has concerned itself only inadequately with questions of symbolism and conditions of significance. The analysis of the natural numbers offered by that work is consequently circular, and the discussions of infinity and continuity are shot through with contradictions. I think he is correct in laying most of the blame for this sad state of affairs upon the extensional treatment of infinity and the continuum, and in believing that the idea of "deducing" mathematics from logic must be given up.

The virtues of the book are also its faults. Its discussions are sketchy, and fundamental criticisms are indicated rather than developed. At one point (p. 113) Mr. Black's argument is vitiated by confusing material implication with deducibility. But his constructive suggestions (many in line with Hilbert's approach), such as on the difference between logic and mathematics, on variables and functions, on type, level, and multiplicity of symbols, are all extremely interesting and deserve fuller discussion than present space allows.

E. N.

An Elementary Logic. GREGORY DEXTER WALCOTT. New York: Harcourt, Brace and Company. 1931. Pp. xvi + 451.

Instructors who have the temerity to teach logic to college freshmen or to advanced preparatory school pupils should find in this book a simple and clearly written exposition of the rudiments of formal logic and a neat arrangement of the more overt procedures in science. There are many graphs, curves, diagrams, and exercises to insure the beginner sufficient practice and perhaps a bit of fun besides. There are no spur lines running off into the hinter-

lands of symbolism, epistemology, or logical "isms." Formal fallacies and methodological errors receive detailed discussion and vivid illustration, and at the end of the book there unfolds a long appendix sheet on which the ways of going deductively and inductively astray are beautifully plotted.

JESSE V. MAUZEY.

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Die ontologischen Grundlagen der neueren Erkenntnislehre.
ECKARDT GÜNTHER. Halle: Max Niemeyer. 1933. 32 pp.
1.40 M.

These few pages are well worth perusal, if only for the remarkably concise and fresh statement of the chief theories criticized, namely, those of Mach, H. Cohen, Natorp, Rickert, N. Hartmann, and to some extent Scheler. I do not imply that, on the other hand, the author's criticisms are unworthy or insignificant. His thesis is the now popular one that attempts to make the theory of knowledge the basic philosophic science have failed. And the argument proceeds by way of showing that such theories of knowledge have inadequate and confused ontological presuppositions concealed in them. The detailed analysis is very neatly done, and certainly succeeds in showing up weak and problematic points in the theories criticized, though it is to be doubted whether some of the implications drawn from the theories would be admitted by their authors. The theories are examined with respect to their treatment of the following topics: (1) the knowing subject and the ontology of consciousness; (2) objectivity and the being of the object; (3) science as the basic fact for philosophy; (4) the realm of values.

The author argues that the relation of meaning rather than that of knowing is constitutive for the concept of "the object." We mean objects prior to and independent of our knowing them. Secondly, he argues that the meaning relation is itself not ontological, being relation. This is what divides him from Hartmann (p. 22). Hence ontology would seem to be quite independent of theories of meaning and knowing. From footnotes one would infer that a fuller exposition of the position with which the author is in sympathy may be found in Günther Jacoby's *Allgemeine Ontologie der Wirklichkeit*, 1928.

H. L. F.

Die Ontologie der Gegenwart in ihren Grundgestalten. GERHARD LEHMANN. Halle: Max Niemeyer Verlag. 1933. 42 pp.
1.80 M.

Published in the same series as the foregoing monograph by Eckardt Günther, this little work of Gerhard Lehmann should be

read as a sequel. Not that the personal views of these two authors stand in such a relationship, but their themes in these two critical essays are continuous. Günther discusses the suppressed ontologies implicit in neo-critical *Erkenntnistheorie*. Lehmann takes up the more recent return in German philosophy to explicit ontological doctrines. He distinguishes four different approaches that have latterly been made to ontology. (1) The phenomenology of Husserl approaches it as a doctrine of the regions of pure consciousness or absolute subjectivity. (2) Heidegger comes to it as a fundamental, generic analysis of the finite existence in which meaning arises. (3) N. Hartmann takes it as the analysis of our consciousness of reality, which includes but also transcends our meaningful acts. (4) Rejecting these "immanentist" approaches, Jacoby undertakes to develop ontology as the concept of reality completely transcendent to and unmodified by the gnoseological acts in which it is meant.

Lehmann's account of these four positions contains less polemic and more sustained analysis than Günther's monograph. In the case of Husserl and Heidegger he includes some discussion of antecedents and of the progressive development of the doctrine. His exposition at this point is full of penetrating insights so remarkably compressed that it defies further abbreviation by the reviewer. In my opinion the essay deserves, not only to be read, but also to be translated into English for its observations on the relations between Husserl's thought and Heidegger's alone.

H. L. F.

L'Esthétique de la Grace. RAYMOND BAYER. Tomes I et II. (Bibliothèque de Philosophie Contemporaine.) Paris: Félix Alcan. 1933. viii + 634 pp.; 579 pp.

The title of this work of over twelve hundred pages might lead the unwary to suspect that one had here an esthetic completely or in part or quasi-theological in character. It is nothing of the sort. M. Bayer, obviously very familiar with the history of esthetic theory, is performing the simple but here very detailed feat of bringing to bear upon esthetic analysis a new concept, and not simply as a counter in a new dialectic. He thinks (and with a certain justice) that reflection upon art has been narrowed, if not often vitiated, by the controlling influence of the concept of beauty, which has in turn been "assimilated" to the idea of the good. It has often been pointed out that a new instrument is of the first order of importance in the enlargement of the field of physical inquiry and speculation. A new concept may serve the same function, and M. Bayer finds such a new and fruitful intellectual instrument in grace.

"Beauty," writes Professor Bayer at the conclusion of the second large volume, "is the harmonious accord in the rhythms of triumph, not without travail, but without the final stigmata of effort at the close. The winged ease which is in the work brings to the spectator the net result of a miracle. Spontaneity, security, the sense of complicity, all that goes to compose a state of alert awareness, organizes itself in a scale of well being. Such a happy accident in the order of alacrity of the whole soul and, in the subject, the availability of an energy everywhere discharged and displayed,—that is grace."

It becomes clear from a closer examination of the book what it is that M. Bayer hopes to accomplish, or after a thousand pages to have accomplished by the introduction of grace as the leading esthetic concept. He interprets at great length and with documented and detailed illustration, the sense of form and form itself as dynamic. He wishes to give us a way of explaining and defining the dynamic and moving aspects of works of art and of any vital experience of them. The concept of beauty has in the past and seems to be for him of necessity both static and moral. The concept of the sublime is almost the opposite of grace. It implies the tension of a moral triumph; dignity is a better name for it than grace. M. Bayer finds many predecessors for his own theme, principally in the eighteenth century and chiefly Home, who writing during the neo-classic revival led by Winckelmann, defines grace as that "agreeable appearance which is born of elegance of movement and a restraint expressing dignity" (not a bad tag for eighteenth-century art). Schiller, too, and later Spencer, have things to say about grace that M. Bayer approves of. But his own enterprise is more comprehensive and spectacular. It is a dynamic metaphysics of art, with the theme of grace as the first principle. He has many interesting illustrations from all the arts, from life, and from the life of the psyche. But, as may be guessed, his most apposite and convincing illustrations come from music and the dance. Interesting as are the illustrative materials and lucid as is the thesis, M. Bayer's "grace" is no more ultimate or exhaustive a concept than beauty. But the concept has the merit of throwing a fresh light from a different quarter on an old problem, and doing justice to those moving rhythms and liberated energies which are so much a part of, and such neglected phases of, the esthetic experience.

I. E.

Cartesio. FRANCESCO OLGATI. Milan: Società Editrice "Vita e Pensiero." 1934. xi + 329 pp. 20 lire.

Professor Olgiati, in what he modestly terms an introduction to the study of Descartes, has produced a detailed account of the phi-

osopher's fortunes in his own times as well as in ours, together with a new interpretation of Cartesianism. The historical portions of the book are admirably documented and have their own value apart from the value of the interpretative portions. These form an outline—which will be filled in, we are told, at a later date—of the “fundamental intuition,” the *idea-madre*, of Descartes, called by Professor Olgiati “rationalistic phenomenalism.”

The doctrine is phenomenalist in that it discusses reality not as being but as appearance; it is rationalistic in that it is essentially deductive rather than empirical. All of these qualifiers are of course vague; indeed the author admits that he is doing little more than suggest his thesis. They may be slightly clarified by the emphasis which he puts upon Descartes' preoccupation with unifying into a deductive system the materials of knowledge. “Explanation,” we find (p. 286), “for Descartes, is unification.” And Professor Olgiati points to his belief in the unity of reason, the unity of the sciences, the unity of the real, the unity of method. But here are three, possibly four, meanings of the word “unity” which, it will be granted, frustrate a reviewer's best intentions.

The book is therefore recommended for reading for its historical sections. It is, however, likely that readers who believe in the doctrine of “mother-ideas” will also find the interpretative sections of great value.

G. B.

Fourier et le Socialisme. A. PINLOCHE. Paris: Félix Alcan. 1933. 195 pp. 20 francs.

“Every time I speak of Fourier,” wrote M. Le Moyne to M. Jules Lechevalier in 1833, “I distinguish *le génie sage* from *le génie extravagant*.” In the present volume, most of which has already appeared in *La Nouvelle Revue*, Professor Pinloche of the University of Lille makes the same useful distinction, aspiring to select from the “immense chaos” of Fourier's writings the ideas deemed worthy of present notice. The bulk of the book consists of an anthology of texts selected from the works of Fourier and his followers, Considérant, Lechevalier, and Pellarin, followed by some over-optimistic prophecies concerning the future of Fourierist ideals. As opposed to Marxist class-struggle, the author emphasizes particularly the need for the complete identification of individual and social goods, and the separation of social and political questions, in order to attain the Fourierist goal of “*l'Association intégrale des individus, des classes, des peuples*,” from which we seem to be about as far distant today as a century ago.

H. A. L.

A *Philosophy for Liberalism*. BRUCE W. BROTHERSTON. Boston: The Beacon Press. 1934. iii + 188 pp. \$2.00.

Liberalism is defined as "the sum total of all movements in the history of man which have had their rise in the normal urgency of the human spirit" (p. 11); but it requires "a philosophy which has nowhere been forthcoming" (p. 12). Until the present despair, it has been satisfied with pure science and *laissez faire*, both of which are now seen to be inadequate because of their atomism and failure to take account of humanity's "native tendency toward unity or organic system" (p. 13). Through a consideration of almost everything from primitive culture to Walter Lippmann, the author proceeds to justify "faith in an inward and nature-made directive principle in mind, directing human nature toward social unity, and even beyond humanity, to the metaphysical satisfaction of a religious urge" (p. 160).

R. S.

JOURNALS AND NEW BOOKS

INTERNATIONAL JOURNAL OF ETHICS. Volume XLIV, No. 3. The Metaphysics of Value, I.: *DeWitt H. Parker*. Have Values a Place in Economics?: *Joseph J. Spengler*. The Jurisprudence of Lorimer: *R. U. Singh*. Progress Inductively Defined: *Stuart C. Dodd*.

PHILOSOPHY. Vol. IX, No. 34. The Present Need of a Philosophy: *Sir Herbert Samuel*. The Leadership of Philosophy: *Hilda D. Oakeley*. Science, Philosophy and Religion: *W. R. Inge*. Introduction to Eighteenth-Century Aesthetic: *Senator B. Croce*. Aristotle's Definition of Moral Virtue, and Plato's Account of the Justice in the Soul: *H. W. B. Joseph*. Itinerarium Mentis in Deum: *Gerald Cator*. Kant's Ethical Formalism: *O. C. Jensen*. Metaphysics of Wonder and Surprise: *R. V. Feldman*.

REVUE PHILOSOPHIQUE. 59 Année, Nos. 3 et 4. Le scepticisme de Hume (2^e partie): *J. Laporte*. L'idée de science de la technique: *J. Pacotte*. Rôle du sens commun en philosophie: *R. Ruyer*. Μῶσα, étude sur l'esthétique de Platon: *H. Perls*.

Logos (Palermo). Anno XVI, Fasc. 4. Morale e religione nella filosofia di H. Bergson: *Cleto Carbonara*. Il problema di Kant e il concetto dell'idealismo trascendentale: *Franco Lombardi*. Riflessioni sul problema del moto assoluto: *Giuseppe Aprile*. La statica e la dinamica del diritto: *Emil Erich Hölscher*. Il tempo: *Adriano Tilgher*. Il primo scritto di Cosmo Guastella: *Eugenio Di Carlo*. Il concetto dell'Io nell'empirismo inglese: *Eugenio Garin*. Il pro-

blema dell'arte nella filosofia di Tommaso Reid: *Michele Federico Sciacca*.

Haider, Carmen: *Do We Want Fascism?* New York: The John Day Co. 1934. xii + 276 pp. \$2.00.

NOTES AND NEWS

The new officers of the Western Division of the American Philosophical Association elected at the meeting at the University of Indiana, March 29-31, 1934, are as follows: President: C. B. Vibbert; Vice-President: T. V. Smith; Secretary-Treasurer: A. C. Benjamin; New Members of the Executive Committee: Herbert Martin and E. T. Mitchell.

There have been published two issues (November, 1933, and January, 1934) of a new periodical entitled *Analysis*, edited by A. E. Duncan-Jones, in coöperation with L. Susan Stebbing, C. A. Mace, and G. Ryle. A third issue will appear this month, and one further issue during the first year of publication. It is hoped that in future years the number of issues will be at least six. The journal will consist, as a rule, of very short contributions, each so far as possible confined to a single point, in which philosophical questions will be discussed from a logical or analytical point of view.

The price of each issue of *Analysis* will be one shilling, post free to those subscribing for the first four numbers. Subscriptions should be sent to the publisher, Basil Blackwell, Broad Street, Oxford, England. Communications should be addressed to the editor, A. E. Duncan-Jones, care of the publisher.

The contents of the first two issues (16 pages each) are as follows: (No. 1) A Statement of Policy. Atomic Propositions: *A. J. Ayer*. A Note on "The Problem of Universals": *Helen Knight*. "About": *G. Ryle*. Solipsism and "The Common Sense View of the World": *R. B. Braithwaite*. (No. 2) Solipsism: *J. O. Wisdom*. Is Solipsism Compatible with Common Sense?: *Maurice Cornforth*. Concerning Solipsism; A Reply to R. B. Braithwaite: *L. S. Stebbing*. Notes of a Lecture by *G. E. Moore*. A Note on Variables: *Donald Sholl*. An Explanatory Note on the Elements of Facts: *John Wisdom*.

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THE JOURNAL OF PHILOSOPHY

THE STATUS OF MIND IN REALITY ¹

THERE has been a persistent view in modern thought that mind is a very distinctive reality, not reducible to or included in any other being, nor properly described in terms natural to objective events, but having a status and career of its own, distinct from Nature. This is the point of view to be represented in this paper, not by any elaborate argument but by giving the various considerations which have led modern thinkers to hold it.

Why did Descartes begin with an assertion of the existence of mind? His interest lay in the objective world of science; he was among those first explorers of "the new system of the world" depicted by Galileo, and his enthusiasm was all about the prospective universal science of "extended" being, a science in terms of mathematical ideas. Why, then, did he complicate his aim by defining two distinct and ultimate realities, mind and body? Perhaps he merely assumed the distinction, as one might who was not yet fully awake from the long night of the Middle Ages! Was this really the case, with such a thinker as Descartes? Was there no *present*, good reason in the experience of that time? Was there no ground for such an assertion of the reality of "thinking" being distinct from the realm of "extended" being?

Consider the consciousness of anyone fully awake at the Renaissance. There were adventures of mankind afar on new seas and continents, and simultaneous exploration of the remote past, Roman, Jewish, Greek. The revival of learning was in full tide. There was, too, the excitement of an age when religious institutions were being brought back to religion from temporal ambitions, whilst princes of nations, ambitiously took their own part, fearing God still, perhaps, but no longer Pope or Emperor. Beside these there was the fine, impersonal ambition of the new science of nature. There is some record of what a contemporary would think and feel, humility, before that awful immensity of the new world; but that was not all. Only those who know *ambition* can ever confess such humility as that. And ambition, indeed, was the very characteristic of that time: man attempting everything, venturing beyond familiar ter-

¹ This paper was read at a Symposium on this subject, December 29, 1933, at the meeting of the Eastern Division of the American Philosophical Association, Amherst, Mass.

rain, not only on earth but in belief and inquiry, for nothing was too much for the human understanding. Ambition, initiative, individual reason and judgment, all this was in the experience of the genius of that age. Men knew that they were great in their powers of mind. They knew perfectly well that it was only the "speculation" in their own eyes that brought such magnificent and vast objective reality to them. "Thinking" being, then, stood with "extended" being; no less, no greater, but ever an equal reality. For let the disclosures concerning the Universe be ever so appalling, exalt Nature as one will, one can not have this as a fact apart from the other fact, that it is the *understanding* of a mind which knows all that. The "endeavor" of the thinker is essential to the attainment of real being, whence endeavor plays so great a part in Spinoza, who, even as he tries to go beyond the duality, carries on the view. There is a parity of mind and matter as forms of being. In one aspect, man sees extended Nature including himself; in another, he appears co-extensive with the world he knows. Physically, the Universe comprehends him; mentally, he comprehends the world in which he is spatially located and determined. The real is an infinite extension; the mind that knows it is a reality itself of infinite reach and aspiration. How to describe such relationships of mind and body *in detail* was the cardinal problem of philosophy in the seventeenth century. All the solutions, with a few exceptions, proceeded from this fundamental view, that the mind is excluded from nothing that can be known, and yet is never included in the matter that is known, for "thought" can not be identified with "extension."

Take a second historical case—Kant, dealing with the doubts which finally beset the Cartesian philosophy, and *reaffirming* the significance of mind. For all his Copernican revolution he did not overturn that fundamental point of view. He proposed an alternative to the notion that thoughts conform to the objects which causally produce them, and yet that alternative itself actually emphasized the centrality of mind: objects of experience conform to the modes of perception and understanding proper to mind. Why did Kant thus become really Ptolemaic, despite his Copernican radicalism? It is easy to say: he was only a belated "rationalist," a "hang-over" of the Cartesian tradition. Was there not some ground, however, in the experience of his century, likewise, to justify this assertion of mind? We are too often inclined to regard that as a time only of criticism, doubt, disbelief, negation. Yet it was one of genuine intellectual activity; and whenever that is so, there are things being freshly discovered, and enthusiasms and affirmations. And that age was, indeed, profoundly enterprising, in the human and social sphere, in education, politics, and morality. Men dared to say that institutions are not fixities of Nature nor ordinances of

God, but agencies of their own making, deeply involving their own reason and will. They thus set out to remake human nature and society, believing in the "perfectibility of man." There was thus ingredient in their experience a faith in the competence of mankind as free agents. And Kant participated in that faith and enthusiasm. He saw the supreme reality of self-legislated moral law alongside the order of the heavens. He apprehended the reality of mind precisely in such law-giving; and he asserted its spontaneity, its initiative, and its real freedom. The moral will of man, or practical reason, is, in that aspect, as great as anything of the Universe—indeed, the Universe itself is too small for a moral character. And the power of mind in law-giving thus becomes the essential thing for knowledge as well as for the office of morality.

The affirmation went, however, to an extreme. Mind prescribes the forms of intelligibility to the real objects of experience. Mind has a centrality and a prescriptive rôle with regard to the entire objective world. "The Understanding *makes* Nature." That declaration echoed long after Kant, and was so oft-repeated that it became unthinking. Experience is reality constituted of mind's forms, categories, even ideals. All relations are due to this constitutive rôle of mind. Thus the objective order entire becomes a dependent thing, dependent on mind; and the two Cartesian realities are resolved into but one, Mind. That cautious notion of things-in-themselves, distinct from appearances; and the still more cautious notion of a self-transcendental, distinct from the mind appreciated in experience; these honest admissions were forgotten. The position settled into a doctrine, and the doctrine into a mere tradition: all that is real is either mind or what is of mind.

And philosophy has been leaning the other way ever since, or rather, discovering a new alternative. The description of experience as categorial is taken to mean something quite different from what Kant first thought. How can the mind prescribe categories to things unless they inherently lend themselves to the ordering, nay, even suggest it? Why, then, are not the categories simply the intrinsic order of experience or nature, instead of being imposed by the mind? Do we not *find* all relations among events and objects, knowledge being such discovery? Are not relations actually felt, as immediately as any other datum, before they are ever discriminated by the understanding? Things and relations are *there* for us; spatio-temporal reality is given us with its categories; experience is actively going-on before the knowing of its lineaments occurs. Space-Time, Nature, Experience, these three loom larger now than mind. And mind appears as a function of Nature, or as an "emergent," in any case, *not* an independent reality.

This alternative view has not come from a spirit of contradiction or from impatience with epistemology or from sheer weariness over the problems, but from something that has been learned about experience since mind was once so exalted. Over a century and a half ago, when the science of mechanics was safely established on its way, the inquiries of men turned toward the phenomena of life and the history of the earth and human society and institutions. The inquirers believed in the experimental method; but they were aware at once that they faced new problems in the application of that method to their subjects. Such men were, for instance, Montesquieu, Buffon, and Hume, all working in the middle of the eighteenth century, spiritually congenial, and cognizant of each other's work.

Montesquieu, investigating the various types of human society past and present, cautioned against "attributing to men prior to the establishment of their society motives which are found in them afterwards. . . ." "To transfer into far-off centuries all the ideas of the century in which one is living is the most fecund of all the sources of error."² Hence Montesquieu did not expect classic uniformity, but variety and individuality; and he studied the laws of peoples as *relative* to their character and to the time, place, and circumstance.

Buffon carried the theme into natural history. "As in civil society one consults titles, . . . deciphers ancient inscriptions to determine the epochs of human revolutions, . . . so in natural history, one must ransack the archives of the world . . . and assemble in a body of proof all the indications of physical changes which enable us to remount to the different ages of nature. It is the sole way of fixing some points in the immensity of space and of placing a certain number of stones on the eternal route of time."³ But Buffon had opened his scientific career with a study of Newton's *Fluxions*, and he knew that one could not reckon mechanically in his subject. On the contrary, one should guard against wanting to judge of a whole by only a part, "for, on observing closely one perceives that its [nature's] course is *not absolutely uniform*; one recognizes that it admits of sensible variations . . . mutations of matter and form. . . . And if we embrace Nature in all its extent, we can not doubt that it is to-day very different from what it was in the beginning. . . . It is here a question of *piercing the night of time*, of recognizing by the inspection of actual things the ancient existence of things that have gone, and remounting solely on the strength of subsisting facts to the *historical truth* of facts dead and buried."⁴ Conse-

² Montesquieu, *De l'esprit des lois, Oeuvres Complètes*, Paris, 1866, Bk. 1, Ch. 2, p. 191; Bk. 30, Ch. 14, p. 488.

³ Buffon, *Histoire naturelle*, 1750, T. ix, p. 455.

⁴ *Op. cit.*, T. i, p. 10, italics mine.

quently, Buffon entitled his work on natural history a description of the various *Epochs of Nature*.

Hume was a student in particular of the natural history of religion; and he proved himself to be the keenest of them all in discerning the problem of the experimental method. "As to past experience, it can be allowed to give direct and certain information of those precise objects only, and that precise period of time, which fell under its cognizance; but *why this experience should be extended to future times and to other objects*, . . . this is the main question. . . . All inferences from experience suppose, as their foundation, that *the future will resemble the past*. . . . Let the course of things be allowed *hitherto* ever so regular, that alone, . . . proves not that *for the future it will continue so*."⁵ And "when Nature has so extremely diversified her manner of operation in this small globe, can we imagine that she *incessantly copies* herself throughout so immense a universe? . . . A very small part of this great system, during a very short time, is very imperfectly discovered to us; and do we thence pronounce decisively concerning the origin of the whole"? And then a back-slap at mind: "What peculiar privilege has this little agitation of the brain which we call *thought*, that we must thus make it the model of the whole universe?"⁶

These men were clearly alive to "the variousness of the Universe" and its "inexhaustible novelty."⁷ It was the appreciation of that which made them dubious of the mechanical uniformity of Nature. It created a problem even for the interpretation of human affairs and society in other places and at other times remote from their own. Thus these inquiring spirits of the eighteenth century came face to face with the reality of time, both in events of Nature and in society. The historical moment had dawned in modern thought. And, in the century to come, the new historical method yielded sciences that were new, sciences of society, paleontology, geology, and biology.

Then, at length, when the historical character of reality was abundantly demonstrated in science, it became accepted in a philosophy which has now reached its classic expression. "Experience is history," one writes, defying the old "dogma which denies temporal quality to reality as such."⁸ Experience is a going-on, an activity where nothing is fixed "for all time," as it were. Connection there is, but not "universal and necessary connection." For the stream of consciousness has its transitive states besides the

⁵ Hume, *Enquiry*, sects. "Sceptical Doubts," "Probability"; italics mine.

⁶ Hume, *Dialogues Concerning Natural Religion*, Dial. 2.

⁷ A. N. Whitehead, *Adventures of Ideas*, Macmillan, 1933, p. 65.

⁸ J. Dewey, *Experience and Nature*, 1st ed. Open Court, 1925, pp. 29, 149, 252, 279. Obviously all the work of Bergson is on this theme.

marked substantive states, and the passages, conjunctions, disjunctions, and other relations are felt directly—nevertheless, on that basis, the mind can not prescribe for future contingencies.⁹ Time being real means that there is real contingency. The Universe is unbound, not confined to the mechanic forms of human categories, but wide-open to futurity and novelty of form and matter. Or, in another version, the story of world-process is again not of a single thread whose line the mind can determine once for all, but a story of events and historic routes and societies and epochs, all in the plural.¹⁰ Or, in another, the real is space-time, and the mind *finds*, but can not impose, the relations, categories, orders of the real.¹¹ In all versions, mind has receded from the place of importance. It is subject to time and the mutability of history. Indeed, it is not even always on the scene, for experience goes on without its cognizance.¹² Thinking, especially, is a very limited process, an activity for the need of some occasion, to which its results are always relative. And truth and all evaluations that seem so final and absolute are essentially relative or historical in character. Mind is, of course, associated with truth and values, sometimes even honored with the half-creative office of “inventing” values.¹³ For all that the status is that of a dependent, as Hume long before intimated, a “servant” in the house of Nature.

There is a most ancient unwillingness in mankind to consider the spirit of man a transitory or merely episodic thing, dancing to the tune of Nature. The conviction has obtained, instead, that whatever might be learned about events, the spirit is an undying reality, not subject to such vicissitudes. We have noticed some of the sources of such a point of view in modern times. The Renaissance knew its own spiritual ambition in the phenomena of exploration, national aggrandisement, religion, art, science—its philosophy, true to the function of reporting the whole of experience, set mind, metaphysically, alongside of extended matter. The eighteenth century, conscious of inner human resources for the radical betterment of political and social life, affirmed the spiritual autonomy of man, and freedom and responsibility for his own career,—and philosophy, again, distinguished mind from Nature. These motives of civilization and

⁹ W. James, *Principles of Psychology*, Ch. 9, pp. 243–255; *Essays on Radical Empiricism*, 1912, pp. 25, 42–52; Ch. 3, pp. 92–122.

¹⁰ Cf. Whitehead, *Process and Reality*, Macmillan, 1929; *Adventures of Ideas*.

¹¹ Cf. S. Alexander, *Space, Time and Deity*, Macmillan, 1920, Bk. 1, Ch. 6; Bk. 2 (The Categories).

¹² Cf. Dewey, *Experience and Nature*, pp. 170, 303, 308.

¹³ Cf. Alexander, *op. cit.*, Vol. II, p. 243; Dewey, *op. cit.*, pp. 211, 217, 220, 247.

culture persist in us still to-day. We are no less ambitious in those pursuits, no less determined to realize ourselves. We are, indeed, more than ever aware of our part in the realms of knowledge and art and social life, the rôle of postulate and category and criterion of value in the making of these things. We are conscious of ourselves as the subjects for whom all such matters have meaning.¹⁴ This is a fact of modern experience. And this fact stands in the way of accepting those conclusions which *postpone* mind to Nature or to processes of reality.

Such opposition leads to a criticism. But the criticism ought not to throw us back upon an old alternative. It should not consist of a disparagement of the temporal nature of the real—let that stand as the substantial achievement of recent philosophy. If anything, let time and history be more adequately appreciated.

But to the criticism. We seem to have been so progressive in our philosophy, of late, that we have not taken the time to be reflective about our own procedure. We have enjoyed great success with the new and unmechanical way of thinking about the history of the earth, living species and human societies; and we have eagerly *extended* it to all experience and nature. The processes of natural history thus become the model of the Universe. The Whole is read in terms of this one part. That has happened before, when Nature was all seen under the aspect of mechanism, and earlier still, under that of theism. But the shades of Hume still watch over this modern argument. Are we following reason here, or merely a habit, or even some enthusiasm of the day? Is there such an assured uniformity that we can unconcernedly pass from the limited subject-matter of one or more sciences to the large general views of philosophy? The historical spirit joins in giving a caution: we ought *not* to expect uniformity, but variety and novelty, in every universe of discourse. Though philosophy is, indeed, continuous with science, it is, nevertheless, distinct; and the difference may be very significant. We should even expect that the method of philosophy would be something other than that form of the experimental method which is employed in the understanding of society and animate nature. The historical way of thinking seems actually to point beyond itself to a metaphysics.

But the procedure of simply translating the concepts of our era of natural history into a metaphysics has been defended: "When a general idea has been obtained, it should not be arbitrarily limited

¹⁴ This aspect of experience is particularly recognized in the work of W. Fite, *The Living Mind, Moral Philosophy*; E. Husserl, *Ideen zur einer reinen Phänomenologie*, etc.; W. E. Hocking, *The Meaning of God*, etc.; C. I. Lewis, *Mind and the World Order*; A. A. Bowman, "Spirit-Time," *Proc. Aristotelian Society*, June 12, 1933; A. E. Taylor, *The Faith of a Moralist*.

to the topic of its origination. In framing a philosophic scheme, each metaphysical notion should be given the widest extension of which it seems capable. It is only in this way that the true adjustment of ideas can be explored."¹⁵ So adjustment is actually expected! That suggests the suspicion of a present one-sidedness.

It has been the aim of this recent philosophy to establish the reality of time; but it has been almost altogether time *for the objective world*. This is natural enough, since it was necessary to chase out the dominating mechanical conception of Nature in order to install an organic, or a societal, concept of Nature where time is duly appreciated. So far, so good, although the victory may be prematurely celebrated. But as a result of this preoccupation, the time of objective succession has been taken to be the sole or ultimate form of time, and a cosmic evolution has been traced, literally in the image of a natural history, where the elaborate, delicate, and unstable higher organisms arise from simpler forms, so that *mind* is, of course, represented as emerging after things that have gone before and passing away before other things to come. Hence mind is subject to the time-order of Nature. There has been no consideration in all this, however, of what time means for a subject who is conscious of it, what it means to appreciate time and history, to live it, to experience it, and therefore to be able to know it and tell the story. The time that *means* past, present, and future for a reflective being is not simply that natural order which admits of dimensional correlations with space. It is distinctive; and much that happens in the life of man is possible only in virtue of time as the history of a person.¹⁶ This time is not, to be sure, *prior* to objective time, but neither is it *posterior*: time really has these two modes, and it is the business of philosophy to understand how that is possible.

There is another form of the one-sidedness of this philosophy. At first sight its appreciation of variety in the Universe seems characterized by a boundless generosity. Nothing that can be felt, discriminated, perceived, or dealt with in any situation is allowed to be lost from reality. Nothing is thrown out; everything is given its place and relations, without suffering from modification by an

¹⁵ Cf. Whitehead, *Adventures of Ideas*, pp. 304-305.

¹⁶ Cf. A. A. Bowman, "Spirit-Time," *Proc. Aristotelian Society*, 1933, pp. 311 ff.; A. E. Taylor, *The Faith of a Moralist*, Macmillan, 1930, Ch. 3 ("Eternity and Temporality") and Ch. 8 ("The Ultimate Tension"); and earlier writings, W. Fite, *The Living Mind*, Ch. 2 ("The Agent and the Observer"), Ch. 14 ("The Human Soul and the Scientific Prepossession"); N. Kemp Smith, *A Commentary to Kant's Critique of Pure Reason*, 1st ed., 1918, pp. 240-248; 277-278; 364-367; T. E. Green, *Prolegomena to Ethics*, Oxford, 1906, Ch. 2, Sects. 55-65. Compare, Whitehead, *Adventures of Ideas*, Ch. 12 ("Past, Present, Future").

interfering mind. The practice of discounting appearances in favor of a privileged reality is gone,—there was always something invidious, exclusive, undemocratic about it. Thus the secondary qualities are redeemed from their limbo of being “subjective”; the tertiary qualities, so-called, follow suit. We are accustomed, too, to the idea of a variety of perspectives of the real: we discount none, we only rectify the account of their time or place or relations to each other. We thus discredit nothing of perception and memory.¹⁷ But what about *judgment*? Do we credit judgment for what it is and represents? Do we accept the characteristic claim of judgment as something over and above perception and memory? The judgment of knowledge contains an assertion of a “universality and necessity” which is no more “subjective” than is a secondary quality. But more than that, it has not the relativity of what is perceptual. Knowledge means the elimination of relativity of standpoint: the limiting conditions are comprised in the understanding of the law or truth and, being understood, are transcended. And this is true of history as well as any other knowledge. And the moral judgment asserts a similar kind of thing, an absolute value. Morality appears from afar as nothing but the custom of the people who have it, and so it is treated as a “conventional” thing. Yet it declares itself as something different, not as another custom or convention, but as righteousness or goodness in itself, something final, and commanding, and critical of prevailing opinion and conduct. There is in it a voice declaring a glory not attained by men. Such imperatives and necessities and perfections present themselves in our experience as well as those varied perspectives of things, and no one is any more “subjective” than the others. There is an objectivity of knowledge and morality (and one may add, art and religion) to which men hearken. It is as real as anything could be. And because of this kind of experience we recognize there is mind. Perhaps this is agreed on all sides. But the language used to express the meaning is profoundly important. We are here compelled to resort to metaphor, and the metaphor is as decisive as in poetry. Some say the mind is associated with values as an “inventor” or “reconstructor,” still thinking in terms of the “machine age” which has been otherwise so well damned. But the mind invents nothing here; it only finds and heeds and understands. It has, indeed, initiative, constructive and questing power—that we all recognize in our lives and work—but are not these energies more like those of inspiration rather than devisings

¹⁷ This is the “realism” of C. D. Broad, *Perception, Physics and Reality*, Cambridge, 1914; *Scientific Thought*, Harcourt, 1923; B. Russell, *Our Knowledge of the External World*, Open Court, 1915, Lectures 3-4; *The Analysis of Matter*, Harcourt, 1927; S. Alexander, *op. cit.*, and A. N. Whitehead, *op. cit.*

prompted by desire—energies called out by a transcendent reality in order to realize an order of being proper to itself in the passing events of history?¹⁸ Mind is, indeed, associated with things of “universal” and “absolute” purport; and, as Plato said long ago, the soul partakes of the nature of that with which it communicates, whence the soul is divine and enjoys a destiny not limited to the Universe of space and time.¹⁹

Here one is on the verge of mythology. This paper pretends to no argued solution; if it does anything, it merely reopens an ancient question. Since a point of view is dominant which puts mind in a position of dependence upon natural events and history, this paper is chiefly intended to assert a kind of independence of mind, on the basis of certain aspects of experience. This does not mean that mind is being reasserted in its previous dominance, from which the present movement of thought is a reaction. To ask that due account be taken of the meaning of time and history for a subject is not to subsume objective time under time in that mode. To say that not all history is natural history is not to deny that the latter has no foundations of its own, but must all come back to mind at last. My suggestion is that philosophy should try to think all these things together, without disparagement of either the objective or the personal aspects of the real.

There is a passage in *Adventures of Ideas* which points to the same line of advance: “When we examine the structure of the epoch of the Universe in which we find ourselves, this structure exhibits successive layers of types of order, each layer introducing some additional type of order of some larger environment. . . . Each one of these regions, with its dominant set of ordering relations, can either be considered from the point of view of the mutual relations of its parts to each other, or it can be considered from the point of view of its impact, as a unity, upon the experience of an external percipient. There is yet a third mode of consideration which combines the other two. The percipient may be an occasion within the region, and may yet grasp the region as one, including the percipient itself as a member of it.”²⁰

Man, as a philosophical being, is the “percipient” described in that last sentence. And the “third mode of consideration” is the true mode for philosophy. We thus have a problem analogous to

¹⁸ Cf. Norman Kemp Smith, *Prolegomena to an Idealist Theory of Knowledge*, Macmillan, 1924, Ch. 9 (“Conclusions”). Cf. Dewey, *op. cit.*, p. 29: “The testimony of an absorbed consciousness that at last it rests upon something superior to the vicissitudes of time is of no more cognitive worth than the testimony of any other purely immediate consciousness.”

¹⁹ Plato, *Phaedo*, 78-81.

²⁰ *Op. cit.*, pp. 256-257.

that of the seventeenth century, and one more difficult, because we must determine the status of mind in regard to a realm which is not only characterized by physical space, but also by historical time.

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WHAT IS MATERIALISM? ¹

RECENT developments in philosophy have suggested that the unanimity and progress long sought for by philosophers may be attained by applying a new method—the operational method of neo-positivism—to allegedly philosophical propositions and problems. This method solves most of the traditional problems of philosophy by discovering reasons why it is irrelevant, or logically meaningless, to ask them. Although I am convinced that this is a fruitful method of solving questions—at least fruitful for the community if not for the philosopher—I can not believe that there is much enlightenment to be gained by such a method unless it is supplemented by an attempt to show why philosophers and others have persisted, and still persist, in raising these problems. It may be quite true that, *viewed from certain assumptions*, some of the traditional problems can not be meaningfully stated. But it is positively fantastic to assume that in philosophy, or in any other field of culture, great potholes and commotion are made merely about words. If philosophical issues are declared to be false and artificial, then it is likely that some other issues associated with philosophical issues or cloaked in philosophical symbols, must have been the *actual* issues in dispute.

From this point of view I wish to consider the issue between materialism and idealism. Two tendencies in modern thought have contributed to making focal the question of what it is which distinguished one philosophical view from the other. On the one hand, the “etherealization” of matter which began in the nineteenth century and dissolved the substantialities of common day experience into complexes of electrical charges and the consequent abandonment of the categories of mechanics as universal explanatory principles, gave rise to the curious belief among physicists, fond of philosophy, that materialism had been “hoist with its own petard,” i.e., finally refuted by its own method. On the other hand, in philosophy itself lines and issues have been so blurred that many philosophers refuse to define their position in terms of traditional doctrines and call for the development of a new vocabulary of philo-

¹ Read, with some minor changes, at the meeting of the Eastern Division of the American Philosophical Association, Amherst College, December, 1933.

sophic classification. Witness, for example, the strenuous contention by contemporary idealists that some of the most illustrious exponents of idealism (Leibniz, Hegel) have been realists in their theory of knowledge, and the merry hunt which this has set up for the proposition which is the *sine qua non* of the idealist faith. The upshot of the discussion has revealed what should have been clear to anyone who has read the history of philosophy without epistemological spectacles, viz., that for most idealists, idealism is not a theory of knowledge but a theory of reality. The proper philosophical opposite of idealism, then, is not realism but materialism. (A more inclusive term which prevents the easy and customary identification of the general position of materialism with any specific historical expression of it, is its naturalism.)

It is one thing to recognize this, but, as philosophical discussion of the recent past has shown, it is quite another thing to isolate the precise point at issue between idealism and materialism in a way which will express the systematic differences between them and at the same time do justice to the great historic alignments in philosophy with which they are associated. The simple aim of this paper is to formulate the significant issue, not to settle it. In order to win the right to make such a formulation, it must first be shown why the traditional statements of the issue, and the answers thereto, are inadequate.

(1) The commonest characterization of materialism, one which prefaces most refutations of the doctrine, attributes to it as a cardinal principle, the assertion that "only matter is real" where *matter* is an historical variable with values ranging from Democritus' "atoms in the void" to Dirac's "positron," and where *real* is an ambiguous term meaning either (a) existence, or (b) importance, or (c) necessary condition.

(a) Now it seems impossible for anyone, especially for a philosopher, to have seriously meant that "only matter exists," for the simple and sufficient reason that such a proposition is *obvious* nonsense; and even Wittgenstein must distinguish between the ultimate nonsense which is metaphysics and the ordinary and unblessed kind. Where existence is further defined and identified with spatio-temporal determination, the assertion only matter exists becomes clearly tautological; where not, clearly false. No matter what philosophers have *said*, they could not have meant that only material things existed. For the very description of material things involves an inescapable reference to generic qualities and structural relations which can not be reduced to matter in motion although they may be predicated of it. Secondly, the very consciousness of material things, not to speak of the experience of pain, pleasure, memory, and fancy, which have no direct objective reference, can

not be dismissed from the realm of existence or degraded to the status of appearance without being recognized. And finally, no materialist of this type can communicate meaningful statements about his position without thereby declaring that there is more in the world than his own system has provided for; since whatever a proposition is, it is something which has implications, and implications are not material things.

Nor is the logic of the situation any different when the idealist proclaims that "only Mind is real" where Mind stands for Reason, Will, Feeling, or Sensation. Here, too, taken literally the proposition represents a violent abuse of terms, for it implies that the conditions of Reason are themselves reasonable, the conditions of Will are endowed with volition, etc. But the proof that the traditional materialist and idealist are not to be taken literally, can be found in their own writings, in which the distinctions drawn by science and common sense are taken over and rebaptized by introducing adjectival differentiations in the Mind or Matter presumed to be exclusively existent. And in truth, when we read how Hobbes distinguishes between different kinds of matter—one of which is identical with what we empirically call mind—or how Berkeley, or Schopenhauer, or Hegel divide perception, will, and reason into kinds or classes—some of which are identical with what we empirically distinguish as non-mental,—and further, when we observe the ease with which the verifiable discoveries of the materialist can be translated into the language of the idealists and *vice versa*—is the inference not justifiable that if there is an issue in dispute, it is not adequately expressed in the propositions considered above?

(b) Where real is admitted to be a category of value—of religion, Hegel says—the monistic declarations of both materialists and idealists are therewith removed from the realm of epistemological or scientific discussion. For if value is an expression which may be equated to importance, then to say "only x is real" is to admit the unimportance, and therefore the existence, of other things, and to betray something primarily, even if not exclusively, about the philosopher himself, the structure of his organism, the character of the culture in which he thrives, and the organization of his interests as revealed in his selective activity. If this theory of value is contested, the problem becomes one of analytical ethics.

(c) Where "real" means necessary condition or independent variable, we have an elliptical statement which becomes more complete when we ask "necessary condition for what?" "independent variable in relation to what situation, context, and expected consequence?" In this sense, the statement " x is real" is an assertion that where certain events are expected or certain effects are to be attained, x (which as a meaningful term involves ultimate denota-

tive reference and as an intelligible process involves the possibility of performing certain acts) is the most reliable sign of the event expected or the most reliable way of securing specific effects. The statement, then, that anything is real in a determinate situation expresses an *order of dependence*, a sequential relation or structure between events. This is what matter and reality mean for the scientist.

It is a methodological commonplace that science is interested in discovering the invariant relations between events and not in the ineffable qualities of the events themselves. For the scientist's purposes the so-called inner nature of the terms of his equations is irrelevant. When he has stated how these terms are related, when he has discovered which are the dependent and independent variables in any law expressing uniform connection, he is describing reality (*a* reality, not *the* reality). Now, there is no sure way of distinguishing between those who have proclaimed themselves to be either materialists or idealists on the basis of their attitude to what we have called the scientist's reality. A great many idealists have accepted a thoroughgoing determinism concerning the ways in which things are *related* even when they have seriously maintained that a chunk of matter is a colony of souls or a complex of sensations. And some materialists have been known who have held to the belief that there are chance events in the world—not merely in the sense that there is an alogical aspect of existence in which structural relations are found—but that structural relations can not always be found everywhere. Determinism, then, is not the issue between materialism and idealism. Nor is nominalism the issue. Although many materialists have simply divided the world, on the one hand, into particular things located in a specific space and time, and, on the other, into concrete mental images, thus denying any objective status to relations and laws, there is nothing in the materialist's scientific procedure which entails this view and a great deal which is incompatible with it. And that it is possible both to deny materialism and affirm nominalism, Berkeley, Mach, and Pearson bear witness. If idealism be defined as the belief in the objectivity of universals, then every form of non-atomistic materialism is in perfect consonance with it.

(2) Another facet of the historic issue between materialism and idealism appears in the form of the question: what is the relation between matter and consciousness?

The primary contention of materialism is that vital and mental phenomena "arise, develop, and cease" with certain observed, or observable, or legitimately inferable changes in physical phenomena. The evidence is gathered by rigorous scientific method in fields ranging from physics to psychology. The idealists profess not to deny

the findings of science, but merely the form in which the materialists have generalized them, as in their statement "consciousness is produced only as a result of a determinate organization of a material system." Here the words "produced" and "only" give offence. "Produced" raises all the difficulties involved in the definition of causation; and "only," the difficulties of induction. But whatever the difficulties may be they are irrelevant to the issue between historic forms of idealism and materialism, for the reason that every positive and consistent system of idealism can not escape the use of these terms, too. If the production of mind by material changes and *only* by material changes is a mystery, then the production or creation of things by mental activity (whether it be the descent of the soul in the metaphor of Plotinus or the self-alienation of mind in the jargon of Hegel) is no less mysterious. The argument that the disparity between mind and matter is so great that there is no common determinable under which their specific qualitative differences may intelligibly be subsumed—an argument derived from the old superstition that "only like can affect like"—would make causal explanation of any qualitative change within any one realm, mental or material, impossible, so that even if the argument were valid, it operates equally against the materialist and idealist.

Sometimes to the challenge of the empirical data accumulated by the scientific materialist which show the manifold ways in which the mind is dependent upon the organization of the body, the idealists respond that either these bodies themselves can be reduced to states of mind or else the substance of things is not purely material but spiritual. When things have been reduced to states of mind we have merely the familiar transformation of the psycho-physical problem into an epistemological one. When things are regarded as essentially spiritual substances, we get a view which is in all verifiable respects the same as that of hylozoism. On the basis of the maxim that there can be no more in the effect than in the cause, the idealist argues that the values of spirit must in some way be potential in the stuff out of which it develops; on the basis of the same maxim, the materialist argues that the distinctive properties of life must be dormant in matter. The result is that it is possible to find in Diderot and Ernst Haeckel sentences which appear only slightly differently accented in Fechner; sentences of Holbach in Wundt; of de la Mettrie in Clifford.

It remains to inquire why, if the issue between traditional materialism and idealism is neither scientifically statable nor solvable, has each party insisted that the essence of things is matter or mind. The answer it seems to me is this. Among the defining properties of mind as we know it in the behavior of highly developed organ-

isms, are purpose and foresight, the capacity to initiate intelligent action in behalf of goals and values. The assertion that mind is a pervasive property of *all* existence means that in some form or other teleological reference to values is to be read back into the structure and function of what is commonly regarded as non-spiritual. Strictly interpreted, then, the behavior of material particles would have a teleological reference in the light of which natural laws could be surveyed as similar in some respects, or necessarily involving, human activity in pursuit of ideals. This would render support to the religious assumption that all the laws of existence—and therefore the laws of nature—serve some purpose, that they are not intelligible in their own terms, but only in relation to an all-encompassing end—explicit or hidden. In a more or less veiled way, this conclusion was actually drawn by all idealists even when the differences between them were as great as those between Berkeley and Leibniz and between both of these and Hegel.

For some philosophers and most ordinary men, to make the hypothesis of universal teleology intelligible, it was necessary to take refuge in some form of theism. Where theism was openly acknowledged, the crucial contention of idealism was the belief in the efficacy at some point of disembodied spirit. This was a sophisticated answer to the old theological problem of whether God created the world or whether the world existed from eternity. During the middle ages, it will be remembered, materialism meant belief in the eternity of the world and disbelief in the activity of final causes. Where theism was not openly acknowledged and the quest for teleological explanation of specific parts of nature eschewed, idealists were compelled to interpret the universe as an harmonious whole, as a cosmic order which was at the same time a moral order. They attempted to explain why there is a world, what its meaning is, and what its goal. That is why metaphysical idealism and religion tended to become, so to speak, socially identical twins. Their purpose was the same: *to justify* the ways of god, or nature, to man. There is no time to offer detailed historic and contemporary documentation of this, but the evidence seems to me to be overwhelming that the chief difference between materialism and idealism centers around the question of the *validity* of the arguments for theism or cosmic purpose. We need but point to the fact that almost in every age the terms "atheism" and "materialism" have been interchangeable. We need but recall that one of the motives of Berkeley—but assuredly only one of them—in his attack upon Newton and other physicists who had taken a mathematical approach to nature, was, in his own words "to restore and sustain faith in the constancy and universality of Divine Agency in the world." Interestingly enough, Hegel, too, in his doctoral dissertation, *de Orbitis Planetarum*, and

in his later writings, condemns Newton's physics because in eliminating qualitative considerations, it made all of nature appear dead and lifeless, incapable of acting as a support for an immanent spiritual principle. And as for contemporary idealism, I find a statement in William McDougall which seems to me to be both typical and revealing. In summarizing the argument for animism, which he identifies with idealism, he says: "animism . . . permits us to hope and even to believe that the world is even better than it seems; that the bitter injustices men suffer are not wholly irreparable and that their moral efforts are not wholly futile."

I would not be misunderstood as saying that belief in cosmic purpose exhausts the wisdom of these men. My point is merely that this faith represents the continuity of the idealist tradition, and that the denial that this faith is necessary for the understanding and control of nature and human nature, is central to the materialist or naturalist position. I add further that the great contributions to philosophy of Berkeley, Leibniz, Hegel, Whitehead, and others seem to me to be obscured by, and not derivative from, their idealism.

In this paper I have tried to re-establish, by a somewhat different line of argument, the thesis laid down a hundred years ago by that much-neglected thinker, Ludwig Feuerbach, that the conflict between materialism and idealism—if and when there is a conflict—is the conflict between naturalism and super-naturalism. Here is not the place to debate the issue. But in view of recent discussion, at least this much must be said. If, as some idealists hold, the problem is not accessible to discursive analysis, then it falls out of the realm of philosophy. Where discursive analysis is permitted, it seems to me that the two key concepts are teleology and probability. To a naturalist, evidence for purpose, needs, organization, and ends in nature, is discovered in the behavior of *specific* things and organisms. No reference to the purpose of the whole is *empirically* relevant to the purposes he discovers by natural observation and experiment. And *logically*, no inference to the existence of such a purpose is permissible until it is first shown that the cosmos has the same structure of the finite things and organisms which are the locus of the purposes already discovered. But since the cosmos is declared to be unlimited in space and time, the naturalist denies both the existence of such a purpose and the rationality of its quest. The concept of probability is crucial to the only argument for the divine existence of God which is still recognized as having force—the argument from design. This argument in every form presupposes the validity of the *a priori* theory of probability, but not conversely. Naturalism, however, accepting the frequency or materialistic theory of probability denies that any unique event or system

or totality can be made the subject of a significant probability judgment.

Where the issues between naturalism and supernaturalism are not resolvable because different criteria of intelligibility are brought to bear upon the argument, I think that further investigation will show that conflicting attitudes, drawn from a non-philosophical context—social or political or cultural—are involved. It is these conflicting attitudes which keep the issues alive. This is largely true, but it can not be the whole truth. At least two things must be added. There is no *necessary* connection between idealism or materialism and the political or social doctrines which may be grafted upon them. Early Christianity was a socially revolutionary force even though its ideology was spiritualistic; the materialism of Hobbes, and in our own day of Santayana, seems perfectly compatible with extreme social conservatism. The nuances and emphases in any philosophical position *may* be historically explained by some political or social motivation, but the logic of any philosophical position, although it may exclude *some* social views, never univocally determines any *one* view. Secondly, social and political attitudes and factors do not *exhaust* the motivations out of which concern with the issue of materialism and idealism arises. No matter what the character of our society may be, it seems to me that the age-old issue between naturalism and supernaturalism will always be freshly discovered when man scans the sky and searches his heart for an answer to the perennial question: how to interpret a world in which he had no making, and to organize a life which was not the consequence of his choosing.

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BOOK REVIEWS

The Horizon of Experience. C. DELISLE BURNS. New York: W. W. Norton & Co. 1934. Pp. 372. \$3.50.

The title of Mr. Burns' book, with its accompanying caption, "A Philosophy for the Modern Man," indicates very fairly the scope and purpose of the work. In the history of human thought, we are told, periods of system building and formulation have alternated with periods devoted mainly to the assimilation of material beyond the confines of existing systems. The modern man, like his cultural analogue in the Renaissance, finds himself in an era of the latter sort. Keenly aware, in science, art, morality, and religion, of unformulated possibilities on the horizon of experience, he needs a philosophy that will reflect the creative incompleteness of the

world he lives in and his own readiness to face its unexplored aspects. Such a philosophy is here presented.

The very considerable merits of this "modern" philosophy are not those of speculative originality or of clarity and rigor in the analysis of concepts. Most of its leading ideas are closely allied to those already expressed by Bergson, Alexander, and Whitehead; the kinship of *Horizons of Experience* and *Adventures of Ideas* is especially marked. The central themes of the temporalist philosophers are judiciously combined and illustrated; for example, Mr. Burns' description of the creative "pull" of as yet unrealized values in emotional experience seems to me sounder and more temperate than Whitehead's notion of "potentialities" as "lures for feeling." But the theory remains a supplement rather than an advance beyond positions already achieved.

Nor is the analysis aided by the author's neglect of the more technical implications of his philosophy. The popular treatment he has chosen makes the book easier to read but not, I think, to understand. For my own part, I should have been glad of more light on the modern meaning of "certainty" (Chapter V), which seemed, as there presented, a rather hazy way of meeting some fairly definite difficulties. And when the modern man learns, after a sweeping elimination of "substance" and reduction of qualities to relations, that "mind" is "a relation of a person" (p. 357) and a person simply "a unique relation between relations" (p. 361), he may find himself nearer the beginning than the end of his philosophic perplexities.

For these limitations, however, there is ample compensation in the breadth and richness of the material that Mr. Burns introduces into his argument. His claim that philosophy can profit by an assimilation of new values, and that it must recognize the efficacy of such values in creative experience, is admirably substantiated by the discussion of specific arts to which a large part of his book is devoted. Nothing is more needed today than a correction of current abstractions by reference to just such value situations, and if this book does not achieve a wholly satisfactory philosophy for the modern man, it does at least correct and enrich existing philosophies by its persuasive presentation of horizon values.

A. E. M.

La Cause et l'Intervalle, ou Ordre et Probabilité. E. DUPRÉEL.
(Archives de la Société Belge de Philosophie. Cinquième Année,
Fasc. 2.) Bruxelles: Maurice Lamertin. 1933. 51 pp. 8 fr.

In this brochure Professor Dupréel wishes to replace the idea of cause as sufficient condition by the notion of a "framework of prob-

ability." There is, he claims, always a logico-spatio-temporal "interval" between cause and effect, within which there may occur such a constellation of events as to preclude the occurrence of the effect. Thus the effect is always only "probable," and the force of the cause-effect relation depends upon the magnitude of this interval. However, probability is essentially an ordinal, not a quantitative notion, and the frame of probability is a function of the arrangement of these intervals. In terms of these ideas, the author sketches a theory of biology, according to which life is neither a phenomenon superimposed upon or an extension of a series of inorganic events, nor the effect of some vitalistic cause, but an emergent character due to the arrangement of intervals. He distinguishes three kinds of arrangements.

Although the essay contains a brief examination of Cournot's doctrine of chance, it has nothing to offer toward an analysis of the ideas of probability and contingency. Everything it has to say suffers, consequently, from the obscurity which veils the fundamental notions in terms of which the analysis is carried through.

E. N.

Realistic Ethics. ANNETTE T. RUBINSTEIN. New York: Privately printed. 1934. 137 pp. \$1.50.

"It is humanly difficult to be an expert in moral values; it is theoretically impossible to be an expert in goodness." For goods are diverse and must be judged in context; goods in different fields are "altogether independent and may often be incompatible" without diminishing their goodness. "There is no meaning to ethical judgment except within the context of a single natural field," and the choice of a field "must be arbitrary." So argues the author in the first half of her ambitious attempt to "rehabilitate realistic ethics" by showing that "the monistic bias commonly associated with realism in ethics is accidental." What she really presents is a case for pluralism in the theory of value, the specifically ethical consequences of which seem highly relativistic, in spite of her efforts to give some interests in themselves a bad name. The second part of her essay contains a critique of current realistic ethical systems, notably those of Perry, Laird, Moore, Santayana and his disciples, and Hartmann, in order to arrive at "a more or less complete formal definition of the fundamental or necessary characteristics of such a system." These turn out to be: an impersonal rather than a moral approach; a sharp distinction between facts and values; an insistence upon the metaphysical parity of evil and good, the intelligibility of all values, and their objectivity in the sense of being discovered rather than created by the valuer. It by no means ap-

pears at first sight that all the systems mentioned have all these characteristics, or that they are "necessary" consequences of realism in other fields. Dr. Rubinstein does well to point out the crucial importance of inclusiveness for Professor Perry's ethics; the gulf which separates the life of reason and the spiritual life for Santayana; and the plausible confusions inherent in Mr. Walter Lippmann's notion of "disinterestedness." Her work would profit by a clearer distinction between ethics and the general theory of value, which she sometimes treats as almost identical. Nevertheless her critical analyses are acute and often brilliant accomplishments in the extremely complex and difficult areas she has chosen to survey. This essay should help to clear the ground for a constructive effort that might more fully deserve the title, *Realistic Ethics*.

H. A. L.

The Aesthetics of William Hazlitt. A Study of the Philosophical Basis of his Criticism. ELIZABETH SCHNEIDER. Philadelphia: University of Pennsylvania Press. 1933. 200 pp. \$2.00.

This book is a model of its kind, and its kind is unfortunately very unfamiliar in American scholarship, particularly in the scholarship devoted to English literature. It has the compressed clarity and neatly documented competence of a good French monograph. It has a sense for ideas and their relations and for the facts to which those ideas are relevant and of which they are an interpretation. It illustrates the qualities Miss Schneider finds in the criticism of Hazlitt himself.

Hazlitt has been so long treated as a vivid essayist writing on random topics, or a critic without any stable and consistent sense or theory underlying his criticism, that Miss Schneider's reappraisal comes with the shock of surprise and the felicity of tardy and, once seen, obvious justice. The author finds positive philosophical ideas in Hazlitt, for all that they were expressed frequently as reactions to the ideas of others. His *Essay on the Principles of Human Action*, while not a major philosophical work, is clearly entitled to be classed as a genuine minor one. It arose in opposition to the materialists and attempts to break down the barriers between the self and the world by breaking down the notion of man as an impassive recipient of impressions. Knowledge is not all passive reception and benevolence is not all self love. Hazlitt criticized the utilitarians for making intellectual calculation the explanation of human conduct, and the French rationalists for interpreting everything in terms of "reason." He expounds a theory of feeling minus the sentimentalism of Rousseau. Feelings

are for him pretty much what Bergson was later to call the immediate data of consciousness. Through the nexus of such ultimate data Hazlitt hoped to devise a theory that would account for those realms of value and spirit, which a strict rationalism, a strict empiricism, and a strict utilitarianism had to leave entirely out of account. Dr. Schneider further tries to prove that Hazlitt was a pluralist. She certainly gives very limited evidence that he was such in quite the explicit and sustained way in which James was. But she does cite from a very shrewd comment on the monistic impulse in philosophy: "He considers the craving after the One as 'a natural infirmity, a disease, a false appetite in the popular feeling which must be gratified. Man is an individual animal with narrow faculties but infinite desires, which he is anxious to concentrate in some one object within the grasp of his imagination.'" But for the most part the author seems to base her conception of Hazlitt as a pluralist on the fact that he was interested in many things. So was Hegel.

Hazlitt's theory of painting, originated in opposition to Reynolds', derives from or results in a certain ultimate metaphysical ground. Whereas the ideal meant for Reynolds the middle or typical in form, "an abstracted average," it meant to Hazlitt that abstraction of anything from all those circumstances that weaken its effect or lessen our admiration of it, an ideal rendered by emphasis, not by averaging.

Miss Schneider has many illuminating things to say, by the way, of Hazlitt's conceptions of style, form, and metre, of his notion of art as the rendering of "concretely intelligible truth." His derivations and deviations from Coleridge are pointed out, as well as the "realistic and pluralistic character of his critical standards. She makes clear too that there was far more "speculation" in the man than in Carlyle with his messages, Pater with his estheticism, and Matthew Arnold with his light for the Philistines.

I. E.

Logic in Practice. L. SUSAN STEBBING. London: Methuen & Co., Ltd. 1934. ix + 113 pp. 2s. 6d.

Miss Stebbing has written an admirable popular book for the publishers' Monographs on Philosophy and Psychology, in which lay readers may be painlessly introduced to some fundamental principles of necessary and probable inference. The number and character of her illustrations drawn from the contemporary social scene, should make nonsense of the frequent reproach that formal logic is only an idle game.

At one point of her exposition Miss Stebbing may perhaps mis-

lead some of her readers. She declares that the formal principles of logic guarantee the validity of deductive reasoning. This is not the best way of putting the matter, if logical principles simply *state* the relevant factors in arguments in virtue of which they are conclusive. Her formulation may lead some to suppose that an argument is valid *because* it conforms to the *theory* of valid arguments.

E. N.

Proceedings of the Aristotelian Society, 1932-1933. New Series, Vol. XXXIII. London: Harrison & Sons, Ltd. 1933. 354 pp.
Creativity, Politics, and the A Priori. Aristotelian Society Supplementary Volume XII. London: Harrison & Sons, Ltd. 1933. 219 pp.

Each of these volumes opens with an address by the President of the Society, Professor Leonard J. Russell: the one, on a certain parallelism between science and art in their emphasis on form; the other, on the logic of propositions about substance and change. Both addresses offer suggestions about some rather difficult matters.

The *Proceedings* volume is, on the whole, rather dull reading. Among the papers most worth perusal may be mentioned that on "Locke's Theory of Universals," by R. I. Aaron; and "A Defence of Causality," by A. C. Ewing.

The *Supplementary* volume contains four symposia, of topics debated at the Birmingham joint meeting with the Mind Association in July, 1933. One on "Imaginary Objects" discusses the status of propositions about Mr. Pickwick, well enough done to leave the reader with some queries whether the debaters have reached the satisfying solution. Professor Catlin's remarks in the second symposium, on "Philosophy and Politics," are especially suggestive; and those of Dr. Schiller, in the third, on "Must Philosophers Disagree?" are amusing and quotable, and not without force. But the most entertaining debate of the four is on "The *A Priori*." Professor H. F. Hallett is an "Apriorist" in the grand manner, and Miss L. S. Stebbing protests that she does not know one word of what he is talking about; whereupon Professor J. H. Muirhead steps in, to try to explain, and assist in her education. Professor Hallett offers one interesting bit of irrefutable knowledge, the proposition, "Knowledge can not be known to be impossible." Professor Stebbing introduces criticisms at the close of her paper, with reference to the views about the *a priori* held by Wittgenstein and C. I. Lewis, which are good enough to make one wish for fuller development.

H. T. C.

The Jealousy of the Gods and Criminal Law at Athens. SVEND RANULF. London: Williams & Norgate, Ltd. Copenhagen: Levin & Munksgaard. Vol. I, pp. 161, 1933. Vol. II, pp. 301, 1934.

The sub-title is "A Contribution to the Sociology of Moral Indignation," and the present work is the first of a series designed to analyze the prejudices or irrational factors that lie behind the disinterested tendency to inflict punishment. These two volumes are devoted to a study of this tendency in Athens, a peculiarly instructive instance, since the tendency in question appears to have arisen there out of nothing. "Before the time of Drakon, the Athenian state seems to have assumed a perfectly neutral attitude towards acts of violence or outrages committed among private citizens. . . . After the time of Solon, the State was to interfere and punish probably first a few and later on a greater number of such encroachments at the request of any citizen, even if the sufferer neither defended himself nor complained of the wrong he had suffered" (I, p. 7). Simultaneously with the appearance of this State interference, we find a similar activity attributed to the gods, whereas it had not been attributed to them previously. In studying this new attitude of the gods, as it is described by Scphocles, Herodotus, and Æschylus, cases come to light in which the divine powers bring ruin to innocent persons or even force people to offend so that they may be punished, and frequently simple jealousy of a man's pre-eminence is enough to rouse divine fury. Furthermore, not only is there no clear distinction between voluntary and involuntary offenses (the arousal of divine jealousy being included under the involuntary), but also the concept of jealousy takes on connotations very close to moral disapprobation. The author therefore suggests that the only adequate explanation for the appearance of State punishment for crimes and the attribution of arbitrary cruelty to the gods lies in an unusually jealous disposition of the Athenian people, where jealousy is to be taken as the irrational root of moral indignation. This thesis is supported, according to the law of concomitant variations as corrected by Durkheim, for sociological applications, by appeal to a number of contemporary phenomena, such as ostracism. Furthermore, it can be shown by a study of Thucydides, Euripides, and Aristophanes that the tendency to inflict punishment and the propensity to envy disappeared simultaneously in the cultured, noble upper class at Athens in the latter half of the fifth century.

The author's explanation of moral indignation "as a kind of disguised envy" (II, p. 289) is to be read in the light of a general belief that "most people and even many sociologists have grossly

exaggerated ideas of the importance of reason as a factor in the past history of mankind" (II, p. 277). In the conclusion, there is an evaluation of the theory that disinterested punishment, envy, and morality are connected, with special consideration of the views of Bertrand Russell and Durkheim. The terminology of Russell has been adopted throughout the present study, because the Greeks themselves attached so much importance to envy; but it would be possible to translate the study into Durkheim's terms and emphasize "le mal de l'infini."

R. S.

Descartes. S. V. KEELING. London: Ernest Benn. 1934. xi + 282 pp. 12s. 6d.

Mr. Keeling has put his analytical gifts to good service in writing a volume for the "Leaders of Philosophy Series" on a thinker whose temperament he was bound to find sympathetic. The volume is divided into three parts, the first upon the "intellectual climate" of Descartes' age, the second a reconstruction of the Cartesian system, the third on the influence of this system. The historical portions of the work could not, given the space at their author's disposal, be as satisfactory as the analytical, and do not in fact contribute much of importance to our knowledge of the period. They will prove, however, very useful to readers relatively unacquainted with the field. The analytical portions, on the other hand, ought to be read with profit by anyone interested in Descartes, for although they do indeed go over old ground, they nevertheless go over it by a new route. There are one or two statements of an historical nature which ought to be corrected. Oresme and Ramus (p. 23), were not the only pre-Cartesian writers to publish a philosophical or scientific treatise in French; Guy de Bruès published his *Dialogues* in the middle of the sixteenth century. Descartes' effect upon French prose seems to me to be over-stated (p. 25). The interest in non-Aristotelian thought during what I take to be the Renaissance (p. 31) is evidenced by men who lived over a period of two hundred years: Nicholas of Cusa and Gassendi are hardly products of the same age. It is very doubtful (p. 34) whether the scepticism of Montaigne and Charron was "covertly directed against the Church's doctrine"; there is such a thing as genuinely pious scepticism. But such blemishes are perhaps inevitable unless one is to spend a lifetime upon a book, nor are they characteristic of Mr. Keeling's work.

G. B.

La Philosophie Religieuse en Grande-Bretagne de 1850 à Nos Jours.
 MAURICE NÉDONCELLE. Préface par Albert Rivaud. Supplément: Paul Archambault, Jean Soulairol, Marcel Prélôt. Paris: Bloud & Gay. 1934. (*Cahiers de la Nouvelle Journée*, no. 26). 233 pp.

This volume is one in a series of Catholic works the authors of which include many of the most competent and well-known Catholic scholars of contemporary France. It is dedicated to the memory of John Henry Newman and Friedrich von Hügel, and seeks to continue the work of making a satisfactory philosophical basis for Catholic faith. The introductory chapter gives a general review of religious philosophy in Great Britain from the time of Hamilton to the present. Then four major chapters are devoted respectively to Mansel, Pringle Pattison, Whitehead, and Inge. These men were chosen out of the wealth of possible material because they seem characteristic of certain British traditions and interests. A final chapter, with abundant deference to St. Augustine and St. Thomas, makes a far-too-quick appraisal of the contribution of British religious philosophy to contemporary thinking.

The four major chapters on Mansel, Pringle Pattison, Whitehead, and Inge give excellent summaries and interpretations of these men and may well be used with profit by students of British thought whether or not these students have primarily a religious interest. They contain many telling comments on British thought which we Americans perhaps stand too close to the British to be able ourselves to formulate, but which we can easily find illuminating for a history of ideas in the last century.

S. P. L.

OTHER NEW BOOKS AND JOURNALS

MIND. Vol. XLIII, No. 170. The Refutation of Realism: W. T. Stace. A Second Reply to Mr. Joseph: L. S. Stebbing. The Problem of the Laches: T. de Laguna. Independent Postulates Related to C. I. Lewis's Theory of Strict Implication: E. V. Huntington. Discussion: Alternative Perspectives and the Invariant Space-Time: A. Ushenko.

THE AUSTRALASIAN JOURNAL OF PSYCHOLOGY AND PHILOSOPHY. Vol. XII, No. 1. Liberty, Equality and Fraternity in the Modern World: W. G. K. Duncan. The Unconscious Significance of Fairyland (II): Jean Mather. The Ethics of Nicolai Hartmann (II): W. R. Boyce Gibson. Husserl's Phenomenological Method (II): J. McKellar Stewart. Notes on Ape Mentality: A. S. Le Souef.

BULLETIN DE LA SOCIÉTÉ FRANÇAISE DE PHILOSOPHIE. 33^e Année, No. 2. Thèse: Le Droit des Peuples à Disposer d'Eux-mêmes: Th. Ruyssen. Discussion: Maurice Amos, L. Brunschvicg, A. Cresson,

E. Halévy, A. Lalande, A. Landry, Max Lazard, J. de Pange, D. Parodi, Jean Ray. Lettres de H. Lévy-Bruhl et R. Lenoir.

Lavelle, Louis: *La Présence Totale*. (Philosophie de l'Esprit.) Paris: Fernand Aubier. 1934. 253 pp.

Metallmann, Joachim: *Problemat struktury i jego dominujace stanowisko w nauce współczesnej*. (The Problem of Structure and its Dominating Part in Modern Science.) With a Summary in German. Reprinted from *Kwartalnik Filozoficzny*, 1934, pp. 332-354.) Krakow: Polska Akademia Umiejętności. (An analysis of "Holostructure.")

NOTES AND NEWS

TO THE EDITORS OF THE JOURNAL OF PHILOSOPHY:

In his review in this JOURNAL for March 29 [Vol. XXXI, pp. 188-190], Dr. Nagel remarks that he has found three misprints in the third volume of the *Collected Papers of Charles Sanders Peirce*. Apparently there has been a misprint in listing these misprints, since the places referred to contain no errors, as students of logic can see at a glance.

In that review, and in a previous one, Dr. Nagel regrets that the Lowell Lectures of 1903 were not published in their entirety. It seems quite evident that Dr. Nagel is under a misapprehension as to the nature and content of these lectures. I am sorry to say that they are not comparable with the lectures of Russell or of Whitehead. They contain a variety of disjointed discussions most of which are little more than simplifications, popularizations, and tentative presentations of what has been much better done elsewhere and published in the different volumes. It seems quite clear from the way in which they were written and preserved that Peirce had no intention of ever publishing them. I doubt whether anyone sufficiently immersed in Peirce's thought and familiar with the content of these lectures but would regret the publication of them in their entirety, particularly since that would mean that some of the more original papers would have to be excluded. I think one might well doubt the judgment of the editors in their choice as to what in the Lowell Lectures is worth preserving; I do not believe that anyone, including Peirce, would care to have the whole series reprinted. It is quite possible that Dr. Nagel has confused the Lowell Lectures of 1903 with the Pragmatism Lectures of 1903, which William James erroneously stated were given at the Lowell Institute. The Pragmatism Lectures are published in their entirety in Volume V, Book I.

BRYN MAWR COLLEGE.

PAUL WEISS.

TO THE EDITORS OF THE JOURNAL OF PHILOSOPHY:

As to the alleged misprints in Vol. III: It was an error to cite the note on p. 220 as containing a misprint. Also, the alleged "missing" variable on p. 326 is in truth not missing; it is however so badly placed and involves a syllabication of algebraic expressions so contrary to mathematical practice (even though sanctioned by Peirce) that I think it not unreasonable to expect that the editors correct Peirce on this point, especially since they correct him on others. If the remaining alleged misprint in this volume is not a misprint at all but intentional, I think the editors' use of the word "uncovered" is not above reproach.

In stating that it was a pity the Lowell Lectures are not to be published in their entirety, I was expressing my disagreement with the piecemeal way in which Peirce's larger manuscripts are being printed in the *Collected Papers*; I was not confusing, as Dr. Weiss kindly suggests, the Lowell with the Pragmatism Lectures. I do not believe that Peirce has so slender a claim upon the attention of philosophers that exhibiting him even in slippers would be fatal to it; and I do think there is a real loss to students and historians of philosophy in not publishing in one piece manuscripts which Peirce himself regarded as forming a unity. In spite of Dr. Weiss's explanation, I still think the policy adopted by the editors on this matter to be mistaken.

COLUMBIA UNIVERSITY.

ERNEST NAGEL.

We take pleasure in announcing that Professor Moritz A. Geiger has been added to our staff of Book Editors. Professor Geiger, formerly of the University of Göttingen, is now at Vassar College, where he has been appointed Professor of Philosophy.

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SELECTION AMONG COSMIC IMAGES

ELPINO: How is it possible that the universe is infinite?

FILOTEO: How is it possible that the universe is finite?

ELPINO: Do you mean that one can prove this infinity?

FILOTEO: Do you mean that one can prove this finitude?

ELPINO: What an extravagance of fantasy that is!

FILOTEO: How *your* view narrows! ¹

FILOTEO and Elpino might in that way take definite stands on practically all conceptions the scientist uses, as action-at-a-distance, inertia, or absolute rotation. And on every one of these questions our imaginary dialogues, unlike Bruno's, could end inconclusively. Filoteo and Elpino would be equally convincing. Nor would any experiment favor the thesis and reject the antithesis.

Assume space infinite, if you wish. You can not, however, claim as Bruno did that the opposite notion is absurd. The latter conception may meet the elegance of your view with cumbersomeness, still the unwieldy image is logically permissible. But surely there are some kinematic properties the antagonist may say, that any physical space whatsoever *must* have for an experiment to have meaning. Analysis, however, invariably points to the same answer: Filoteo can construct a mechanical image to interpret the identical experiment which will differ widely from Elpino's. Always there is choice for the scientist.

This refutes the usual view that the scientist records only what he finds in the world about him. That picture portrays the scientist so impersonal that with his observed data he does not build his laws; rather he uncovers the laws of nature. He no more makes the Law of Gravitation than he gives roundness to the earth. Therefore, if he be a physicist, we feel we can almost replace him by one of his many instruments. Everything is so completely determined, all one need do is to connect the dots on the graph paper and we have a curve, expressing a natural law!

The scientist, however, can no more be classed among fact-finding machines than Titian can be classed among cameras. Our purpose, therefore, is to show that the scientist, too, is an artist. It then holds that the law of nature is held within bounds, controlled by our experiments, but not *completely* determined by them.

¹ Giordano Bruno: *De l'infinito universo e mondi*.

For instance, the scientist tries a simple experiment, say, Galileo's experiment with falling bodies. He sets up his apparatus. The weight is dropped, and the readings are recorded. The scientist has tested Galileo's findings, and he seems forced to Galileo's conclusion: $s = \frac{1}{2} gt^2$. Could there be a better instance of a definite unique law? Yet the history of the development of the law that "governs" falling bodies shows that this experiment is far from simple. Even the apparatus is complicated—in fact, so complicated, that we must presuppose with Kant a logic, with its judgments, and a geometry—a *complete universe*—before we can interpret our experiment. We eliminate certain features in the apparatus as irrelevant. And then we say: "Under ideal conditions, the law is. . . ." But has not the scientist been forced to Galileo's conclusion only because he has Galileo's world view?

The principle to guide our search for the *principium individuationis*—the space-time lattice—is Kantian: What kind of space and what kind of time must every scientist presuppose for any experiment whatsoever? The question of the infinity of time is hardly relevant for any experiment a scientist with his finite number of observations can undertake. Nor does our solution so much revolve on empirical findings as on the method of critical philosophy.

Time has been likened to a continuous stream—but unlike the Jordan, no Joshua had ever stopped its flow and then bade it resume. Since we become conscious of the flow of time through the motion of bodies, some have thought of time as a function of motion. This functional-hypothesis of time is very ancient, dating back to the Upanishads, about 600 B.C. In the *Timaeus* Dialogue, Plato suggests a similar thought. And it is also very modern. Some workers in the *quantum theory* suggest that time is a function of some elemental particle, as the electron or proton, and of the velocity of light. The functional-hypothesis of time was refuted by Plotinus and again by St. Augustine. We postulate *for possible experience* that time is continuous and uniform—a view with which the functional-hypothesis ill accords.

The second hypothesis is that of "discrete-time," but with it is allied the doctrine that motion is illusory. If the universe is perpetually being created by God, then we can have no genuine flow of time. If this world is only a series of cinema films, which when run off successively gives the illusion of motion and life, continuity of time is then a fiction. But instead of postulating a time-flow, a much more complex situation is being presupposed.

But the question of the continuity of time has been presented by the founder of modern mechanics, and upon his positive answer is

built the science of to-day. In Galileo's *The Two New Sciences* discussion arises on the meaning of acceleration. Is acceleration proportional to the space traversed or to the time elapsed? The former thesis assumes time discontinuous, the latter that it be continuous. The meaning of Galileo's conclusion for us is that he *chose* time to be continuous. A body therefore can not be in two places simultaneously. Our science, which is built on his results, has confirmed the wisdom of his choice.

We postulate then for our mechanics this third hypothesis of time. Ostwald has formulated its properties: that it be continuous, single-valued, that it contain no double points, and that it indicate direction. We can therefore describe all phenomena *in* time, and consider motion as a function, $f(t)$, where t is the independent variable and is continuous. Then, under arbitrary transformations of this parameter t , an invariance in form of our kinematical equations is required. Yet every observer, whether he measures by the theory of relativity or by the classical theory, assumes Ostwald's postulates. The difference between Einstein's local time and Newton's absolute time is that for the latter an additional assumption must be made, namely, that there be a privileged observer.

Through the centuries the basic geometry of mechanics was assumed to be identical with the pure geometry of Euclid. Gauss had impiously enough hoped that there be a constant measure in the universe, that space be non-Euclidean. Today the scientists consider that space in an intense gravitational field or in the immediate region of an electron with its high velocity to be non-Euclidean. But whatever spatial geometry the physicist uses is a *metric geometry*. And since the metric is the characteristic of a geometry, we now inquire into the kind of metric the scientist elects. That he must choose *some* metric seems obvious.

That the physics of today has discarded the metric of the three-dimensional Euclidean space, $ds^2 = dx_1^2 + dx_2^2 + dx_3^2$ for $ds^2 = dx_1^2 - dx_2^2 - dx_3^2 - dx_4^2$ indicates that our metric is undetermined except by experiment. The g_{ij} 's lie within a range of error. Yet *within the limits of the threshold of observation*² we have a choice of many world-geometries, ranging from slight modifications of Euclid, to the "spherical" universe of De Sitter, and to the "cylindrical" universe of Einstein. And connected closely with the choice of the metric is the problem, whether the universe is infinite, or finite but boundless, or perhaps finite but expanding. We conclude then that for physical space a *metric must be postu-*

² The classification based on the threshold of observation is the one developed by Edgar A. Singer, Jr., in his forthcoming book, *Experience and Reflection*.

lated; but the limits of experimental error leaves room for a wide choice for the scientist.

And now to turn to the region that falls beneath the lower threshold of observation. Beyond the reach of an ultra-microscope are the answers to the problems of image-building. For instance, of utmost interest to physical geometry is the determination whether the universe be a plenum or a void. A microscope is useless in seeking the solution.

From the Parmenidean doctrine that empty space can not be are descended Descartes' vortices and the modern hypothesis of an ether. In spite of Aristotle's contention, the opposing notion of Leucippus and Democritus, that the atoms clash in empty space, has had its many champions—especially since the days of Galileo. The special theory of relativity, for instance, because of its insistence on observational data, reminded the scientist that the modern plenum, the Ether, has never been more than a permissible construction in his image-making, and not a physical phenomenon measureable in his laboratory.

Now, the empty space of Democritus is consistent with Newton's theory of gravitation. And the hypothesis of action-at-a-distance has been defended by such keen men as Kant and Laplace. But in general, scientists have been always chary about accepting the hypothesis of action-at-a-distance. Huygens frankly said that "Newton's principle of attraction appeared to him absurd," and Lord Kelvin called it "the most fantastic of paradoxes." And only the intense dislike Newton had for what he called "hypotheses" prevented him from dwelling at length on his own "conjecture" explaining gravitation without invoking action-at-a-distance. Einstein regards universal gravitation as *equivalent* to a uniformly accelerated field of force. Hence, the theory of relativity assumes that gravitational force travels no faster than light. But unless action-at-a-distance be definitely rejected by experiment, its usefulness in furthering the search for truth will be unimpaired.

We see therefore that in the region beneath the lower threshold of observation, the scientist of to-day *may choose between alternative hypotheses*.

It is the upper threshold of observation that places perturbations of phenomena within the range of natural laws and common experiences, just as the adjoining of infinity to Euclidean geometry erases exceptions to general theorems (as, any two straight lines in a plane, *except* parallel lines, intersect in one point). As an instance, let us consider the Second Law of Thermodynamics. To accept this law means however that we take the definite position that the world is finite in time. But now cosmic rays are discovered

that bombard the earth! Therefore, Millikan concludes, somewhere in interstellar space, beyond the upper threshold of observation, nature is constantly building the heavier atoms from lighter ones; energy flows uphill; and the Second Law of Thermodynamics does not hold. These phenomena, Compton argues, are caused by free electrons whose motions are influenced by the magnet earth, and hence the Second Law of Thermodynamics does hold!

Then this region above the threshold of observation gives us possibilities of choice in theories for our image-making.

Even the question of continuity of path—an idea seemingly so obvious that one can hardly conceive its opposite—was once seriously debated by Galileo. If we wish to disregard the adage "*Natura non facit saltus*," mathematical expressions of discontinuity can be developed that will satisfy all observations within any limits of error. Of course, the mathematics of continuous paths is much easier than that of discontinuities. And when we *assume* discontinuity, that motion is instantaneous, and that the same physical object can be in two places at the same time, we encounter the difficult problem of identifying the object. And even in the world of the electron the champion of continuity need not despair; his differential equations are adequate to describe the phenomena in this sub-atomic world.

And that there are choices independent of the presence of error can be readily illustrated by considering the concept of "mass." Henri Poincaré, after recounting difficulties of Newton, Thomson, and Lagrange, in defining mass, advances this definition: "*Les masses sont des coefficients commodes dans les calculs.*"—Very clear! But only this sort of definition can withstand such modification in physical concepts as the discovery that an increase in energy also means an increase in mass.

Were we to examine the Principle of Inertia or any other fundamental conception of mechanics, we would find the scientist choosing at almost every step between equally attractive alternative interpretations. Experimental data does not decide for or against Euclidean geometry. The formulation of our metric, or of the "cosmical constant λ " will perhaps be recast a dozen times, but always within its scope will be found choices for the scientist. For the phenomena of nature are no more couched in the language of action-at-a-distance, or in a Democritean void, than they are in the language of action-through-contact-only or in an Aristotelian or Cartesian plenum. The scientist selects from any number of colorful world images that interpret natural phenomena; a dying universe, with its energy running downhill; a universe constantly replenishing its waste; a young gigantic soap-bubble universe, hurling nebulae with astonishing speed through space; an oscillating world; a world with ghost stars! Con-

tinuity or discontinuity of path, inertia, mass—there is no concept in science that does not have a rival. It is always a selection from among possibilities. Experimentation may control our explanations, but it does not eliminate choice for the scientist.

The reason the classical empiricist was so certain that through his inductive method he could find *all* the laws in nature, is that he ignored in his experiments the seemingly unimportant fact—probable error. The physicist, towards the end of the nineteenth century, felt it was only a question of time before the remaining details of the universal laws would be filled in. Today, however, we feel confronted, as never before, by most serious problems in every aspect of physics. For instance, in the realm of the electron, we owe our knowledge—and even our perplexity—of quanta behavior to the physicist's method of narrowing the range of observational error as much as he can. The new surprising pictures within the Quantum Theory have won against the older and more familiar atomic models—because ever-present *experimental error* has definitely eliminated the latter.

In the past the scientist has not always realized the full import of the assumption that attached to his data is an error of observation. Nevertheless his freedom in building a cosmic image is inextricably bound up with the notion of mean reading and mean variation. Must there then be errors which no scientist can charm away?

Although an instrument's purpose is to ensure certainty just where our senses waver, the instrument's very refinement removes the doubt to a few decimal places further in an unending decimal series. However painstaking he is in constructing his instrument—a balance, say—the scientist recognizes the crudity of all human workmanship, and hence *assumes* accidental errors. Now these accidental errors affect his procedure. One reading is worthless—worthless because with it comes no possibility of calculating a probable error. Nor are two readings much better. For when these conflict, which can we say is more worthy of credence? Three readings, however, give us the opportunity to establish a mean and mean variations.

As the scientist makes a series of measurements upon the same quantity, he notes that although the series of measurements with its different readings narrow the location of the true value within limits, he can never learn the *true* value, and must always use an approximation. He acknowledges that probable error is attached to any series of observations; no observation will give us the *true* value; and the mean reading can never be more than an approximation of the true value.

In our attempts at eliminating systematic error we are equally unsuccessful. If the experiment be in the realm of electrons and quanta, we definitely affirm the uncertainty-principle. What is that but an acknowledgment that the experimenter's manipulations influence the observation? If our experiment be to measure the exact length of a meter-stick, it does matter how we hold it. What is the Fitzgerald Contraction but a confession of systematic error?

A complicated mechanism ". . . with centric and eccentric scribbled o'er, cycle and epicycle, orb in orb" explained for 1800 years planetary motions. Then the variable error in the observations of the motion of the planet Mars was reduced by Tycho Brahe so much, that a *systematic error* of eight minutes of arc appeared. "Out of these eight minutes," Kepler announced, "we will construct a new theory that will explain the motions of all the planets." But we can never isolate completely our experiment to the realm within our laboratory walls. Whether we blame the perturbations of the distant stars, as Newton did, or we seek other causes, the conclusion seems obvious: systematic errors, as well as observational errors, will always prevent us from obtaining the true value in any finite series of observations.

Hence, any attempted determination of the true value of an x will only give us a range of values reaching from $x_0 - e$ to $x_0 + e$, where x_0 is the mean reading. We can reduce the value of e to less than any given value, but we can never reduce it to zero. Therefore, we can never know the true value of any x , but only an approximation within limits of error.

Nor will the graphing of any single valued function $y=f(x)$ give us a curve, but a band having for its width the finite interval $2e$. In the case of a freely falling body, the space traversed depends on the time of falling, or $s=F(t)$, where F may be some complicated function of t , its values controlled by experiment. We have no unique empirical formula. The value of s may be $F_1(t \pm e)$ or $F_2(t \pm e)$ or $F_3(t \pm e)$. Now in the band whose width has the finite extent of $2e$, an infinity of curves may be drawn, and any of these will empirically satisfy the observation $s=F(t)$ within the limits of error. If therefore we choose—no matter what the motive has been for our choice— $s=F_1(t)$ and if this formula is within the limit of error of the experiment, we can call this a *Law of Nature*. Some other scientist, who perhaps has another purpose in mind, prefers $s=F_2(t)$, a much more complicated function of t . Yet this checks up equally well in the laboratory. We reach the strange conclusion that the Law of Nature we write depends within limits on our choice.

"My theory of vortices is a philosophical romance," Descartes confessed. And every theory in science is equally a philosophical romance. Only, the scientist, since the days of Galileo, demands of his imagination that all explanations be in terms of a mechanism. Such a limitation is like the self-imposed restrictions of Dante or Milton, to use a metrical pattern.

Now Lord Bacon's method for successful science—the accumulation of facts, their arrangement, and the discovery of *the unique Law of Nature* (the explanation of the facts), has been embarrassing through its very success. Instead of one theory explaining, say, the attraction of the stone to the earth, we may choose between a Newtonian theory of gravity, the impact-theory of Le Sage, the explanation offered by the theory of relativity, and—who can warrant that some physicist of the future will not propound a yet more ingenious hypothesis?

The old answer in deciding between two theories was to see which fitted the facts. That method is hardly applicable here. Descartes' physics can be resuscitated by a modern physicist, if he wishes to expend the necessary labor, and the modern can make it fit the facts. Then any choice between Descartes' vortices and Newton's action-at-a-distance to explain the motions of planets must be made on other considerations than those of fact.

The scientist prefers, say, Copernicus to Ptolemy, not that the first is true and the latter false, but that the Copernican theory is much the simpler. Then "*economy of means*" is the ideal which impels the scientist to frame his theory as elegantly as he can. How can the scientist build his system to obtain this maximum economy?

Kirchhoff's ideal, simplicity in description, is naïvely vague, and therefore not easy to follow. Should we then prize ease in writing down the mathematical expression of natural laws, or perhaps strive for an invariance of law for all observers? These and many other motives have stimulated the imagination of the scientist. Galileo, for instance, aimed at a simplicity of what sort? His ideal was to make of mechanics a system that would be the analogue of Euclid's *Elements*. And as Euclid builds his geometry on definitions and axioms, "self-evident truths," so Galileo conceives his mechanics.

These ultimates have for other scientists been geometrical solids and even musical intervals. For Kepler a Pythagorean world picture was the goal. This longing for simplicity in mathematical expression enlisted champions for Copernican astronomy who even braved the displeasure of the Church. For instance, Kepler's Laws form a much more elegant theory than the then traditional description of the motions, now fast, now slow, across the sky.

But the scientist's preference for simple mathematical relation-

ships gave place to the complicated mathematics of Huygens and Newton. Newton's success in replacing two laws with one, the law for the motion of the planets, and Galileo's law for falling bodies, by one law pervading the universe, expressed the new goal: make your principle so comprehensive, that the laws already known form but special cases of it. Laplace, in perfecting Newton's scheme, little regarded whether the necessary mathematics had become difficult. But gravitation is a force that acts in only one direction: two bodies attract each other. A more general law would comprehend both attraction and repulsion; otherwise we must acknowledge the two forces of the Greeks, a love and a hate, in the universe. Boscovich would therefore combine repulsion and attraction into one law of nature and thus reach this goal—universality.

Mach then suggested for the universal goal a new simplicity: *economy of thought*. But this invites the criticism: "economy of thought" is a vague expression. What procedure must be used to reach such an economy? "Economy of thought" is as indefinite as Poincaré's "expediency" or as Kirchhoff's definition of a natural law, as the simplest possible description of natural motions, for the retort, what kind of simplicity, is inevitable. The world applauded Newton for supplanting Galileo's mathematically simple expression by a more complex one. What then can simplicity in description mean, anyway!

Now, every economy must be one either in the number of basic elements, or in the method of operations, i.e., in the logical relations between the basic elements. The ideal for science would be a combination of both economies.

The procedure of the scientist in his laboratory should show us what economy there can be in method. Whatever the experiment be, we see how definitely he describes his procedure. For the successful repetition of the experiment is the test another scientist has of the truth of the results. He must therefore affirm that any hypothesis, or law of nature, one scientist deduces as a result of his experimenting, should be equally true for all observers.

Not only must a law of nature be invariant for all observers, but the very formulation of the law should be free from personal preferences for particular co-ordinate systems. Whether the scientist used Cartesian or polar co-ordinates in his figuring should never enter into the form of a law of nature. Tensor mathematics, a language of the most universal kind, permits us to change from one set of co-ordinates to any other set, while keeping certain functions of the co-ordinates invariant. For precisely this reason Einstein, with unerring instinct, chose it for the theory of relativity.

Let us now turn to the study of the other possible economy:

frugality in the number of basic elements in a mechanical image. Each of the necessary fundamental conceptions we call a "dimension." If L , for example, denotes length, and T time, velocity can be represented by L/T or LT^{-1} . The dimensions of force are equal to mass times the dimensions of acceleration. Since the dimensions of acceleration are LT^{-2} , and if M represents a mass then force is MLT^{-2} . We must not, however, consider any particular dimension as ultimate. For instance, in place of one of the dimensions, M , L , or T , the concept "energy" may be used.

But even if the concepts in physics are not ultimate, we usually think of a geometrical configuration as having a definite number of dimensions. A line is one-dimensional, a plane two-dimensional, and Euclidean space is three-dimensional. Yet the same geometrical configuration can be regarded as having a different number of dimensions, depending on what geometrical elements we consider basic. The number of dimensions only tells us how many co-ordinates the given configuration needs for it to be individuated. And therefore in our mechanical image the number of dimensions is determined by what we choose to be our basic elements.

The ideal world picture is one in which the number of dimensions is reduced to a minimum. And the scientist chooses his fundamental elements with an eye to economy in the number of dimensions needed. Thus he to-day prefers a complicated four-dimensional time-space Riemannian geometry to the corresponding ten-dimensional Euclidean space.

Economy of means is the motive that prompts him to construct the physical atom with as few properties ($\alpha, \beta, \gamma, \dots$) as possible. And only because of the desire for economy in the number of dimensions does the scientist select continuity of path and uses analytic functions, thereby assuring himself of some conservation principle.

The task of the scientist is endless, for no finite labor will reduce observational error to zero. He eliminates, however, from time to time various mathematical curves and their corresponding "laws of nature." He constantly changes his cosmic picture to meet more rigid conditions. But the conceptions of time and space are pregnant with rich possibilities for the nature of the physical atom. An artist's instinct leads the natural philosopher to an economy in his formulation of logical relations and dimensions of the geometry and the space-time of his experiment.

In this way, he is an artist, and it is a creator's vision that impels him to *build* a world picture and *choose* laws to explain the universe.

PHILADELPHIA.

HAYM JAFFE.

THE SELF, GIVEN AND IMPLIED—A DISCUSSION

A RECENT article by Professor Donald C. Williams¹ evinces a disposition, not too common in contemporary philosophy, to deal with fundamentals. "The Innocence of the Given" treats of the fundamental epistemological situation, which is just as truly the fundamental metaphysical situation. The article is especially welcome to me because I find in it so much with which I am in unreserved agreement; and philosophical agreement is greatly to be desired by everyone who does not prefer contradiction to consistency. But along with my agreement goes a certain amount of perplexity. I should like to state the agreement together with the perplexity, and to ask Professor Williams a question or two.

At the outset where Professor Williams states his fundamental theses about the given, there is hardly anything to which I object. It is true that the words in the third sentence, "*given* to human minds — . . . ingredients of the conscious experience of those minds," raise a question as to what these minds are in addition to or apart from what is given to them; do minds consist of their ingredients or is there an unmentioned or ungiven somewhat that is the real mind? This question, however, may be waived for the moment. The important fact is that there actually is something given which is a complex of ingredients of conscious experience. The presence of such a given can be denied successfully by no conscious being. That the given is not knowledge about itself is the main thesis of Professor Williams, and with it I agree, unless there is some hidden meaning in the word "knowledge" not discoverable in the exposition. In this sense, then, the given is truly "innocent." The given, as given, is never known, although Professor Williams hastens to make precisely the explanation at this point that I hoped he would make, when he points out that the given does not have to be "a blind problem," but may be "highly structured and articulate, . . . the whole fabric of an interpretation and the solution of a problem."² This point is repeated in the statement that "if x is complex in the manner of the knowledge-pattern, its givenness will constitute a knowledge." All objection is disarmed when the further explanation is made that, under certain conditions, "givenness will constitute not only a knowledge, but at the same time a datum which a knowledge is about."³ These statements, including their entire context in section 3, constitute a sound analysis of the knowledge situation. They

¹ Donald C. Williams, "The Innocence of the Given," this JOURNAL, Volume XXX (1933), pp. 617-628. Reference to this article will be by page number.

² Top of p. 618.

³ Top of p. 619.

assume, obviously, that the given may be known; but the knowing is not the known—Lloyd Morgan's *experiencing* is not the *experienced*.

Given experience, then, is just what it is, namely, acquaintance, even though it be acquaintance with a knowing process. The meaning of the word "to know" can never be wholly present in the given. Although all knowing occurs in the given, it is always in some sense a reference to or a description of something which is not now given. This is what I take Professor Williams to mean, and what I hold to be true. Under some circumstances, knowledge may refer to "nothing but the given qualities and relations of the given,"⁴ but even then, the given known is other than the given given.

Thus far Professor Williams' article is clear and, in my opinion, correct. The attack on the proposition that "all opinions about the ungiven are 'meaningless'"⁵ is likewise well grounded. It is certainly true that what is not now given in my experience may be known, and also that what has never been and never will be given in my experience may be known. I should also agree with Professor Williams that there is no epistemological or *a priori* reason for supposing that there is nothing in the universe whose essence it is to be ungiven. But this point might have been explained more fully. Nothing but empirical investigation and coherent philosophical analysis and synopsis can determine whether there is anything absolutely ungiven. There is no magic way of showing in a sentence or two whether the idealism which holds that there is nothing essentially ungiven in the universe or the realism which holds that most of the universe is now and always will be ungiven, is a better account of reality. They are competing hypotheses not to be disposed of by an epistemological gesture. In view of this explanation, I am able, as a personalistic idealist, to agree with the rejection of the four propositions to the criticism of which Professor Williams devotes the next two or three pages of his article. These propositions are: "(1) If a thing is known, it must be given. (2) If a thing is not given, it can not be known. (3) If a thing is given, it must be known. (4) If a thing is not known, it can not be given."⁶ These propositions are just as false for a personalist, or at least for this personalist, as they are for Professor Williams. It may be clarifying to formulate the personalistic "truths," i.e., propositions held by a personalist to be truth, which the four "errors" deny. They would be: (1) If a thing is known by a self, it does not need to be a present ingredient of that self. (2) If a thing is not a present ingredient of a self, it may nevertheless be known. (3) If a thing is a present

⁴ Second paragraph of 4, second half of p. 619.

⁵ Top of p. 620.

⁶ P. 620, just below the middle of the page.

ingredient of a self, it may be felt or willed without being known, provided the word "known" is not a loose equivalent for "being an ingredient of present awareness." Not all awareness is knowledge.

(4) Even though a thing is not known, in the sense of being described or understood, it may, notwithstanding its being unknown, be a present ingredient of conscious experience; there may be acquaintance without knowledge by description. I should be grateful to Professor Williams or to anyone who would object to these "personalistic" theses, if he were to explain his reasons for objecting.

Thus far in the article there is practically complete accord among all epistemological dualists, at least some epistemological monists, most personalists, all Hegelians, and Professor Williams. I was about to celebrate the millennium when the realistic lion lies down with the idealistic lamb, when it suddenly began to appear that the lamb would be *aufgehoben* inside the lion unless steps were taken. For suddenly, and to my surprise and embarrassment, I found myself quoted⁷ among the enemies of my own convictions. I am rightly said to have written the words, "The experienced fact that every item of experience belongs to a self." This I have taken to mean that everything given is in the context of more that is given. In fact I say explicitly on the page following the one quoted by Professor Williams that "the self is the datum," and I explain briefly the confusion between self-consciousness and self-experience.⁸ By the datum, or self-experience, I mean exactly what I take Professor Williams to mean by the given, the ingredients of the conscious experience of mind, with the proviso that the ingredients do not occur separately like grains of pepper, but are given in a *gestalt* which is a true whole. Despite this agreement with Professor Williams, I am classified with those who are asserted to hold that the self shares "special honors with Deity as an object of intuitive revelation."⁹ If Professor Williams had taken the trouble to read my treatment of intuition, or my article on "The Dialectic of Religious Experience," or my paper on "The Dialectical Unity of Consciousness and the Metaphysics of Religion,"¹⁰ or anything else that I have written

⁷ Middle of p. 622, and note 8.

⁸ *Proceedings of the Sixth International Congress of Philosophy*, p. 163.

⁹ Middle of p. 622.

¹⁰ These references are to be found respectively in the following sources. *An Introduction to Philosophy*, pp. 46-49; *The Philosophical Review*, Volume XXXVIII (1929), pp. 557-573; *Proceedings of the Seventh International Congress of Philosophy*, pp. 70-77. See also the explanation of the bearing of "knowledge" by acquaintance on epistemological dualism (which I defended before Lovejoy's *Revolt*), in *An Introduction to Philosophy*, pp. 80-89, in which I already point out, what I now hold much more clearly than then, that "our own self-experience is not, so long as it remains mere experience, genuine knowledge" (p. 88). My view of the self is most fully stated in *A Philosophy of Ideals*, Chapter I, and *Contemporary Idealism in America*, Chapter VIII.

about theory of knowledge, he would know that I have always rejected the proposition that Deity is an object of intuitive revelation, and have never confused the given in self-experience with the knowledge of reflective self-consciousness. His misunderstanding becomes more egregious when one reads his introductory remarks about mystics and intuitionists as maintaining unreservedly that "sheer givenness is a kind of knowledge so complete and certain that the discursive intelligence is in comparison a hopeless falsifier."¹¹ I repudiate classification under this rubric.

When one's ideas are so completely misunderstood as mine are by Professor Williams, one ought to be reasonably certain that there is some basis for the misunderstanding. I can see at least one reason for the interpretation which Professor Williams put upon my statement. In the context of his argument, my words, "the experienced fact that every item of experience belongs to a self," might be taken to mean that I asserted an intuitive knowledge about all possible items of experience. Yet in the context of my paper, which is here quoted, I tried to guard against such a view by dwelling on the empirical nature of personalism. For the sake of explicit clearness, however, my statement should be revised to read: "the experienced fact, whenever there is given experience, that every item of that experience belongs to the self which is the whole given context." This revision represents no change from what was first meant, and is intended, like Professor Williams' article, to convey knowledge about the given. I still agree with Professor Williams in his main contention, despite his belief that I do not; I reject the proposition that acquaintance with my given self is knowledge of that self, for knowledge is description and is mediation, dualistic in structure.

The latter portion of the article (from p. 625 on) deals with other matters, the relation of which to the foregoing is at some points both remote and dubious. I shall therefore refrain at present from discussing those pages, save for one or two references which are relevant to the main purpose of the present discussion. But I should like to ask one or two questions of Professor Williams which arise from my perplexity about his interpretation of my ideas.

The first question is: Why does Professor Williams not say explicitly that the given is a self or a mind? Obviously it is not a *whole* self, a *whole* mind; but is it not at least a partial self? He says that given "things" (a term which I suspect of being a "weasel-word"; a realistic question-begging epithet) are "*given* to human minds," and are "ingredients of the conscious experience of those minds." Is not the given, then, what the mind is at the moment? He calls the mind "an organization of conscious expe-

¹¹ Page 621, beginning of section 3.

rience" and describes certain of its processes.¹² He adds, as we have already seen, that the given "is very often highly structured and articulate; it may be as amenable or spontaneous as you please; and it may itself be the whole fabric of an interpretation and the solution of a problem."¹³ Then why not a complex, yet unified, active, thinking self? No expression that is used of the given refers to anything other than a self-experience. "Goggling attention" and "blank raw feel"¹⁴ are both descriptions of a self in some of its phases. The illustrative reference to the difference between a star and knowing a star surely does not imply that a star could be "given," although a casual reader might suppose that it did.¹⁵

The second question is: Is there any objection to treating as synonymous the following expressions: the given, present consciousness, specious present, time-span (Royce's term emphasizing, of course, the temporal structure of the present self), present self-experience, field of attention, datum self? If so, why?

The third question is: Does hesitancy in speaking of the given as a self arise from the fear that the word "self" may somehow pollute the innocence of the given? It is true that to call the given a self means that the innocent self has eaten the fruit of the tree of knowledge. But can a given be a given—such a given as interprets and solves problems—without generating knowledge? Or perhaps the real ground for hesitancy lies deeper. Perhaps it is well not to call the given a self in order to avoid "the fallacy of initial predication" made famous by the new realists. Perhaps this principle of safety first commands us to bear in mind from the start "the possibility of plural rôles for the consciously given."¹⁶ But if such caution forbids acknowledgment that the datum is a self, how can Professor Williams call it a mind and ascribe to it all the properties mentioned in his article? If he replies, in Professor Lovejoy's words, that "a thing can possess more than one character or relation,"¹⁷ I should reply that being a self is at least one indefeasible character of the given. I should also add that the given is not given as a "thing" or a complex of things; to suppose that it is so given is to fall prey to initial predication in its worst form. Santayana and Kant are right in supposing that existence (barring only the temporal "existence" of the given experience) is not given. The supposition that an idea may be both an idea and a thing (or other objective entity or complex) at one and the same time, which

¹² The quotations are from p. 617.

¹³ P. 618.

¹⁴ P. 619 and p. 626, n. 19.

¹⁵ Pp. 621-622.

¹⁶ P. 627, n. 21.

¹⁷ *Loc. cit.*

is the fundamental error of realistic epistemological monism, rests on an exaggeration of the difficulties in epistemological dualism, and on a strained analogy. The realists have been telling us that since a point x may be located both in line $a-b$ and in line $c-d$, namely, at their intersection, therefore (therefore always need watching!) any given idea may be both in the conscious series and in the thing series. There is, of course, no cogency at all in the inference. The analogy, at most, teaches us to avoid idealistic dogmatism. It does not prove, or even render plausible, a realistic theory of knowledge. But this issue is incidental both for Professor Williams and for me in the present context. The main point is that the self is given and is given as conscious experience; and that everything beyond this given self can be known only in the spirit of Peirce's "contrite fallibilism."¹⁸ Yet I should like to know whether my speculation about the reason for impersonal terminology in a personal situation is sound.

EDGAR S. BRIGHTMAN.

BOSTON UNIVERSITY.

My reference to Mr. Brightman quoted from the following sentence: "Personalism is radically empirical in building (as against sensationalism and behaviorism) on the experienced fact that every item of experience belongs to a self."¹⁹ *Prima facie*, there seem, even after Mr. Brightman's recension, to be three fairly plausible ways of interpreting it, none of them entirely satisfactory. (1) "Personalism finds given in immediate experience, as fundamental datum, that experience is a part or a product of the sort of thing customarily called a self or person." I was wrong in assuming this interpretation, and I am sorry for the injustice done Mr. Brightman, whose general views, with respect to such possibility, are very sound. Let us note, however, that my interpretation still does represent a belief, often held and often regarded as thoroughly "empirical," which violates our principle that givenness is not knowledge. (2) "Personalism adopts as a fundamental hypothesis that immediate experience is a part or a product of what is customarily called a self or person." Such hypothesis, I admit, is a legitimate candidate for verification. It seems to me, however, rather the apex than the foundation of a philosophy, and not properly described as "an experienced fact" nor its acceptance as "radically empirical." (3)

¹⁸ P. 628.

¹⁹ *The Proceedings of the Sixth International Congress of Philosophy*, p. 162. The sentence continues, after a comma: "as was forcefully stated in the paper by Miss M. W. Calkins on 'An Essential Factor in Every Truly Radical Empiricism' which was read before the Eastern Division of the American Philosophical Association at its 1923 meeting."

"Personalism begins by *defining* the 'self' or 'person' as the total content of immediate experience." In reply to Mr. Brightman's question, I confess at present to no decided prejudice against this definition. I do ordinarily mean the word "mind" in that sense, so that my "given to the mind" strictly is redundant. But it is not the usual definition, according to which the self is a special sort of agent, substantive, "real whole," or, "unified, active, thinking" being, and it is an especially poor definition for Mr. Brightman, since it is quite compatible with sensationalism or even a sane behaviorism, and it empties the name "personalism" of nearly all which has recommended it to its adherents. Mr. Brightman, I think, believes that the self is *both* the total of experience *and* an "active, thinking" "real whole." Such belief, however, is not a definition. It asserts a real connection of characters, and is in fact identical with the problematic material hypothesis considered above (2).

It is a gratifying gain in mutual understanding that the lion and the lamb should start off together, even if they do not eventually lie down together. For my part, I grant the propriety of Mr. Brightman's personalistic version of the contradictories of the four "errors" which I contested. I regret any inadvertent realistic taint about the word "thing," which I intended quite universally, for *any* thing from angels to atoms. I grant that our principle invalidates all off-hand immediate attempts to prove, "by epistemological gesture," that the given does not consist of the visible facets of a spiritual reality, and I grant that the denial of "exclusive particularity" is no positive evidence *for* direct realism. Mr. Brightman, on his part, might justly concede that the denial of "exclusive particularity" disposes of one formidable *a priori* prejudice against direct realism, and that our principle that givenness is not knowledge invalidates any off-hand immediate attempt to prove that the given does not consist of the visible facets of physical objects external to a perceiving organism—yes, even of *stars*.

DONALD C. WILLIAMS.

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ABSTRACTS OF PAPERS READ AT THE THIRTY-FIFTH
ANNUAL MEETING OF THE WESTERN DIVISION OF
THE AMERICAN PHILOSOPHICAL ASSOCIATION,
INDIANA UNIVERSITY, MARCH 29 TO 31, 1934

Physics, Metaphysics, and Theology. HERBERT MARTIN.

Eddington (*The Nature of the Physical World*) offers at least four approaches to an idealistic interpretation of reality: (1) Con-

sciousness testifies to "a higher reality" that the metrical, symbolic world of physics. This reality is continuous with and of the nature of consciousness, indeed a "universal Mind or Logos." (2) Entropy and Becoming witness that time is uni-directional, has an arrow, that the increase of the random element in the universe indicates a beginning with a maximum of organization. Here are inklings of a creator and a "creation at a time not infinitely remote." (3) Mysticism reveals a world of purposes and significances untrammelled by metrical specification. Mystical experience shows "that our minds are not apart from the world." Our unceasing quest for values suggests their inherence in the structure of reality, an "Absolute Valuer" whose they are and whence they come. (4) With determinism "dropped out permanently," with "no strict causal behavior anywhere" our "intuition of Free Will" finds validation, the Supernatural becomes more easy of access.

A series of criticisms of these modes of escape from the closed circle of pointer readings of physics concludes that Eddington's conclusions not only do not follow from his premises, but even if they did, his Supernatural, or Creator, or Absolute Mind is far other than the God of the religious consciousness. In view of this it is regrettable that his prestige as physicist is carried over in the popular mind to his views as metaphysician and theologian.

Method in Philosophy. CARROLL D. W. HILDEBRAND.

Since method so largely determines the substance of philosophy and it is the task of philosophy to follow every pathway which leads to truth, method is a significant problem for philosophy. The method of abstraction seeks reality through a search for universals, objective but independent of particulars. Reality consists in an abstract universal which lies beyond experience and thus becomes a negative category.

The method of concretion interprets reality in terms of human experience critically evaluated. The unity thus achieved is a concrete universal in the sense that particulars and universals or content and form are united. We find in personality an instance of a particularizing universal and a universalizing particular.

This personalistic hypothesis would appear to justify certain important deductions. For example, it reconciles some of the deepest antinomies of reason, determinism and indeterminism, unity and plurality, change and identity, and teleology and mechanism. Moreover, the discovery that the real is personal affords a significant theory for an adequate social philosophy. It would, therefore, seem that the method of concretion together with the conclusion to which it leads, namely, a concrete universal which is personal, must chal-

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lenge thoughtful consideration when claims to truth are under investigation.

Beauty, Definability, and Analysis. LIONEL RUBY.

The position asserted is that the concept of beauty is unanalyzable and therefore indefinable. Analysis is taken to be the essential nature of "real" as distinguished from "nominal" definition, and concepts which refer to simple qualities are not susceptible of analysis. The tertiary quality of beauty resembles color in so far as it is also a simple; hence it is an indefinable, just as color is. The physical conditions underlying color may be described, and the object which is beautiful may be described also, but color as color, beauty as beauty, are irreducible simples.

Beauty is apprehended as a pervasive character among certain of the objects in experience, but it is impossible to define the character which we thus apprehend. Beauty can be denoted, but at the terminus of the process of denotation we find a simple quale. The concept of beauty lacks any kind of significant connotation, and we can not explain the nature of beauty by a manipulation of concepts. The difficulty is similar to that of explaining the nature of color to a blind man—we learn what beauty is by being introduced to it. Every supposed definition runs into the destructive criticism that an object may possess the described characteristics and yet lack beauty.

Knowledge by Fiat. ELEANOR BISBEE.

The mind, according to C. I. Lewis, creates at will its own *a priori*. This proves to be a pseudo-*a priori*. Recurrence of "givens" in experience, although ineffable, set the mind in a certain direction. The mind, consequently, coins a category and draws implications from it. By this account, when the implications are valid, the reasoning is true, and when what is implied turns out to be what also happens in experience, it is also useful and we, therefore, "know." This revives the old problem of the inductive leap—when should we proceed from experienced recurrence of "givens" to a predictive generalization? To this Mr. Lewis adds the problem, when can the will pronounce an empirical generalization to be a permanent intension—all exceptions thereafter excluded, by fiat? This will, he says, is subject to pragmatic control in a most empirical relationship between knower and environment. That the mind, with this fiat power, has avoided dangerous inflation of knowledge by purely verbal, hence worthless, categories is due to what Mr. Lewis calls the "miracle" of "similarity of human animals and of their primal interests, and the similarities of the experience with which

they have to deal."¹ This epistemology merely substitutes for the traditional problem of uniform categories fixed by original human endowment, the new metaphysical problem of preëstablished ontological similarities, and leaves the old problems of the *a posteriori* quite unanswered.

Emile Meyerson and the Epistemological Paradox. THOMAS R. KELLY.

Three factors produce an impasse in Meyerson's philosophy. Explanation moves toward bare identity, toward the sphere of Parmenides; reality, ever productive of diversity, is unidirectional, entropic. Thus explanation and reality are essentially divergent. Yet a third factor, the ontological urge in explanation requires that explanation and reality converge, that the real be rational. Three conclusions arise. (1) Meyerson establishes to his own satisfaction the divergent natures of explanation and reality, but supports their convergence wistfully, as a hope only, not having the factual certainty attaching to their divergence. This situation warrants us in pronouncing the consequence of his work positivistic. In spite of his protest against Comtean positivism, his own epistemology issues in the defeat of the epistemological process. (2) His conception of explanation as a single process is over-simplified. Kant's richer teaching indicates that reason moves not merely toward homogeneity, but also toward specification, toward ever sharper discrimination of differences as a consequence of which explanation may arise. (3) His conception of reality is in terms of the familiar abstractions of science. Instead of turning toward immediate experience, he commits what Whitehead calls the fallacy of misplaced concreteness.

But even if we replace Meyerson's metaphysics by one wherein the processes of explanation and of reality follow the same schema, the original paradox will return again, both as an epistemological and as a metaphysical one. The permanent value of his work lies in his clear statement of this predicament which seems incapable of resolution.

What is Wrong with Current Systems of Symbolic Logic? DAVID F. SWENSON.

The question posed can be briefly answered: The *interpretations* on the one hand, by which the symbolism becomes a language for logic, are at crucial points loose and inexact, introducing a misleading terminology and betraying logical confusion; the *rules of operation* on the other hand, by which the algebra is manipulated as an instrument of proof, are such as to encourage an illegitimate ab-

¹ *Mind and the World Order*, p. 20.

straction from essential logical differences, introducing a spurious "generality" into logic. This double confusion in contemporary "exact" logics is more precisely described as follows: relational and non-relational categories are formally equated as if they were commensurable; non-relational functions arising by substitution out of relational ones, and possible or impossible or necessary functions similarly arising by substitution out of one another, are not distinguished as such, but are dealt with as if they were homogeneous with the expressions from which they are derived. The "paradoxical" theorems which emerge as the inevitable consequence of these errors have been dismissed with an inadequate explanation; some logicians have accorded them the respect of recognition as genuine categories of thought. Under this last interpretation, new implication categories are envisaged by the billions, and mysterious profundities have become the order of the day.

The argumentation offered in behalf of the above thesis is too technical and detailed to summarize. The author examines the logical foundations of *Principia Mathematica*, and comes to the conclusion that just as the proposition " p is incompatible with q " is in the second edition illegitimately imported into the system as a reading for the stroke-function (p/q), so the proposition " p implies q " is illegitimately present in the first edition (as well as the second) as a reading for the hook-function ($p \supset q$). *No form of the implication category is actually expressed in the symbols of this system; the system is thus not a formulation of the laws of inference.* The class calculus on the Boole-Schroeder foundations is in a similar predicament with respect to its problem of formulating class-relations. And the pragmatic interpretation of the phenomena offered by Professor Lewis is shown to have no better foundation than loose thinking and inept terminology.

An Objective Probabilism—A Criticism. HOMER H. DUBS.

This paper criticizes the popular view that science, although it can not attain any certainty, nevertheless achieves probability, taking Dr. E. Nagel's logical theory as an exemplification of that view.

In a scientific spirit he rejects intuition, the *a priori*, and such subjective certainties. Individual probabilities he holds can be determined by empirical frequencies of occurrence; the probability of a theory is the probability of its consequences.

But empirical observation of frequencies only establishes a probability under special circumstances. A long series of observations in which the atomic weight of mercury was measured as constant proved little; today mercury is recognized to have at least four different atomic weights. Certain larger generalizations, such as

Kepler's first law, have abundant exceptions (the perturbations), yet the certainty of the law is thereby unshaken and no probability is thereby established.

Furthermore, if no certainty is attainable, not even probabilities are certain; for then every probability is itself probable, that secondary probability is again only probable, and so on indefinitely. The mathematics of infinite series shows that such a set of probabilities must be summed as zero except under very special circumstances; evidence is offered that these special circumstances are rarely attainable. It follows that, unless certainty can somehow be attained, all probabilities reduce to zero; not even the best established scientific result can claim any logical superiority over the wildest myth.

On the Nature of Reference. PHILIP BLAIR RICE.

Current analyses of knowing as a sign-situation confuse reference and meaning. Meaning is here defined as a complex relation between sign and interpretation, both of which are psychological events. Reference, in the case of a perceptual judgment, involves a transcendence of the psychological order; it is an imputed relation between the interpretation or corrected datum and an independently existing object. The pragmatist treats the object as a "brute existent" which starts off the knowing act and then drops out of the picture; later phases of the act are described entirely in terms of meaning. Ogden and Richards declare reference to be nothing but an inverted causal relation, a backhanded assertion that the object causes the sign and the sign in turn causes the interpretation. For both these views, the "what" of the stimulus-object is unknowable, and the object therefore plays exactly the same rôle in knowledge as did the Kantian thing-in-itself. Critical realism carries the analysis one step farther by saying that reference asserts not only transcendence of the mental content, but also relevance of the mental content to the object. The treatment of relevance in terms of essence, however, is found to be unacceptable. It is suggested that the only escape from this new form of Kantian phenomenalism consists in a rehabilitation of the distinction between primary and secondary properties.

The Spatial Location of Sensa. HORACE S. FRIES.

We shall examine five crucial implications of the hypothesis that sensa have physical, spatial location within the physical body, but external to the immediately perceived body, of the percipient. The examination will reveal that these implications are self-consistent, adequate, and consistent with our body of knowledge. Thus, the

hypothesis furnishes a basis for a method of extensive abstraction; and unless the principle of parsimony is unscientifically rejected, it must be accepted as true. For competing hypotheses, which even pretend to be adequate for the metrical requirements of physics by giving physical, spatial location to sensa, must make the *ad hoc* assumption that there is a projective mechanism within the per-cipient's organism to project either (1) the immediate awareness of sensa or else (2) the sensa and the immediate awareness. The only alternative is to deny the immediacy of immediately perceived sensa. This denial is the self-contradiction of identity materialism.

The five implications are concerned respectively with the following points: (1) The physiological conditions necessary to allow for immediately perceived "externality." (2) Immediately perceived sizes and distances. (3) The simple measurement of external physical sizes and distances. (4) A distinction (not an opposition) between sensa and other physical brain conditions to account for a brain locality which is "physically" heterogeneous, but which is also the locality of relatively homogeneous sensa. (5) The nature of knowledge in general. Knowledge is primarily a causal process which is referential or mediative; it is only secondarily intuitional.

BOOK REVIEWS

Art as Experience. JOHN DEWEY. New York: Minton, Balch & Company. 1934. viii + 355 pp. \$4.00.

The appearance of Professor Dewey's *Art as Experience* is important to two distinct publics in philosophy. For those primarily interested in esthetics it affords a comprehensive analysis of the "common substance" and the "varied substance" of the arts, and the connection of the esthetic with other human interests. It characteristically breaks down the barriers that have both in art and in theory separated art from the rest of experience and fine arts from art in general. For the philosophical public interested in the bearings of Dewey's theory of experience on the varied enterprises and undergoings in life and civilization, this book is of special significance in an understanding of the Deweyan position. It treats art, both on the appreciative and creative side, as a liberation, organization, and integration of experience, and sees in art therefore a "challenge to philosophy."

"In art as an experience, actuality and possibility or ideality, the new and the old, objective material and personal response, the individual and the universal, surface and depth, sense and meaning, are integrated in an experience in which they are all transfigured

from the significance that belongs to them when isolated in reflection. . . . The significance of art as experience is, therefore, incomparable for the adventure of philosophic thought" (p. 297).

The book includes an examination of the characteristic features as well as the common basis of all art, is marked by a rich variety of citation from great artists on their own procedure, and concludes with an examination of the chief current positions in esthetics and their meaning and limitations in the light of "art considered as experience" and in the context of "criticism" and "civilization."

I. E.

Le Concept de Droit selon Aristote et S. Thomas. R. P. LOUIS LACHANCE, O.P. Montreal: Albert Levesque. Paris: Du Recueil Sirey. 1933. 453 pp. 50 francs.

The task to which Père Lachance addresses himself is the exposition of the Aristotelian-Thomistic conception of law, but in the accomplishment of that historical task he performs a philosophic service as well: he raises many questions, suggests many distinctions and goes into many side issues of the philosophy of law which might be used profitably for the clarification of contemporary discussions of jurisprudence. The philosopher of law today still finds subjects for discussion in the relation of law to ethics, in the nature of the social sciences and their bearing on law, in the possibility of a science of law and the character such a science should have, but the answers that are suggested in almost every issue of the law reviews of the land show little indication that we have profited by the analyses philosophers have made in the past or that we have learned to avoid the errors they have exposed. Père Lachance presents in detail and in its numerous theoretic and practical ramifications the subtle analysis of law which was made first in the *Ethics* and the *Politics* of Aristotle and which was later developed and systematized in Thomas's commentaries on those works and in the second part of the *Summa Theologica*. The detail of the exposition is from Thomas Aquinas, although the point of departure is usually from Aristotle. Père Lachance is convinced that Thomas not only develops the applications and concatenations suggested by the Aristotelian theory, but also examines the basis of that theory more thoroughly than had Aristotle: in particular Thomas makes explicit (cf. pp. 212 ff.) a fundamental distinction—to be found in Aristotle, to be sure, but little developed by him—between *droit* and *loi* (*jus* and *lex*). Under Thomas's scrutiny that distinction, which was old when the Roman law was codified, is made to yield the formal, efficient, and final causes of law. The exposition is made, consequently, with full

recognition of the difficulties and peculiarities of a science which would deal with the actions of a human agent, whose actions, since he is free, would vary infinitely. It would not be sufficient, however, to point out that in the Aristotelian tradition such sciences are practical, not theoretical sciences, that it would be improper to seek the same precision in all sciences: if there is to be a science of law in a strict sense, it must treat of causes. In the analysis of Thomas Aquinas the science of law must treat of final causes. Book I of Père Lachance's exposition of this science of law takes up the exterior causes of law, first the teleology of law, that is, the relation of law to the common good, then the etiology of law, that is, the relation of law to reason and order. Book II proceeds to the intrinsic causes of law, involving an analysis of the nature of law, justice, and equality; Book III considers the beneficiaries and subjects of law; Book IV finally examines law among the sciences. In the course of these four books, many terms of an older theory—among them natural law, justice, order—which according to the boast of many modern schools have been dropped from the discussion of law, occur as crucial terms of the theory; it is refreshing to see these terms, which have been rejected so frequently in senses which they were never intended to have, employed in an intelligible meaning once more.

R. McK.

The Categories of Charles Peirce. EUGENE FREEMAN. Chicago: The Open Court Publishing Company. 1934. 62 pp. \$1.00.

This is a useful though somewhat narrowly conceived conspectus of Peirce's doctrine of categories, and their relation to his theories of logic, pragmatism, tychism, and synechism. Mr. Freeman is chiefly preoccupied with trying to resolve the dilemma of the categories as at the same time universal and objective. He points out that in claiming both properties for his categories Peirce accepted a naïve rationalism not compatible at all points with his empirical outlook. Mr. Freeman also indicates difficulties which arise when meanings conceived as habits are employed to develop a theory of reality, or when a speculative idealism is claimed to be established by means of principles which are simply descriptive of nature. His general conclusion is that while the categories satisfy the conditions of objectivity, Peirce does not and can not demonstrate their universality or their completeness.

Mr. Freeman's monograph is the first of a probably endless series of studies which will approach Peirce as a systematic speculative thinker, an approach fostered by the editors of *Collected Papers*. This is, of course, a neglected side of Peirce. But in my opinion

it would be a mistake and a real loss to philosophy to subordinate the critic and clarifier of ideas to the Peirce who wrote in the grand manner.
E. N.

Mécanismes et Conscience. E. AUGIER. Paris: Félix Alcan. 1934. 355 pp. 30 fr.

This is another attempt to construct an "objective" psychology, this time by catching the "elementary" facts of consciousness as they speed by and classifying them. The only difference which this reviewer has been able to discover between the technique of M. Augier and that of classical analytic psychology is that M. Augier believes in the primacy of motor habits, as he calls them. The frequent repetition of certain acts, he believes, will reveal to the observer certain constant elements which become clarified with the recurrence of the act. That is no doubt true, but who is to say that the repetition itself is not the cause of the simplification and clarification? If so, then nothing elementary has been discovered at all. For it is obvious that conscious elements, if they are to be like physical elements, ought to be discoverable in their compounds. But by the very nature of things such a discovery is impossible. This ought to make an investigator conclude that his research is a waste of time. It usually, however, stimulates him to redouble his efforts.

G. B.

Social Reformers: Adam Smith to John Dewey. Edited by DONALD O. WAGNER. New York: The Macmillan Company. 1934. viii + 749 pp. \$3.25.

This anthology lives up to its ambitious title adequately enough to be acclaimed as a very useful book. Dr. Wagner has selected thirty-three writers, with an eye to their geographical distribution, chronology, similarity of points of view, evolution of doctrine, and adaptability to quotation, assigning an average of about twenty pages to each. As Professor Carlton J. H. Hayes remarks in his Foreword to the volume: "The selected passages are brief enough to be at once arresting and easily readable; and they are long enough . . . to convey at least the flavor of each author's whole philosophy." Brief biographical sketches are supplied, some of which suffer from journalistic efforts to be amusing. A surprising number of the reformers included turn out to have been intellectual prodigies in infancy. It is always possible to quarrel with the choices made, particularly when as "Critics and Interpreters of Modern Society" we find only Tolstoy, Veblen, Tawney, and Dewey. But on the whole Dr. Wagner has done his work of selection (and some translation also) well, thereby placing in his debt a whole host of teachers of elementary social and political philosophy.

H. A. L.

Essentials in the Development of Religion. J. E. TURNER. (Library of Philosophy.) New York: The Macmillan Company. 1934. 308 pp. \$4.00.

The book is described in the sub-title as "a philosophic and psychological study" and was written "with the conviction that the psychological analysis of all phases of religious experience, even those which may be accounted the highest, is capable of yielding results of inestimable importance which could be attained in no other way" (p. 13). At the same time, this psychological study does no more than prepare the way for philosophy, and the author acknowledges (p. 19) that his standpoint is predominantly philosophical. In fact, the thought is on such a high level of generality that readers on this side of the Atlantic, deafened by the discordant shoutings of scientific psychologists, had much better put it down simply as philosophy.

Religion is defined as "the response or attitude of humanity, when this response is taken as being an *explicit unity* or real whole, to the Universe, likewise taken as a whole" (p. 32), a definition so wide that it becomes impossible to differentiate religion definitely from the rest of experience or to allow any such thing as irreligion. A similar inclusiveness is found in the author's attitude toward the various modes of experience: "Each of these modes—perception, will, imagination and thought—comes into contact with this world in its own specific way and at a different level, and penetrates its being and nature more or less profoundly according to its peculiar capacity" (p. 79). This inclusive attitude, combined with the generality of treatment and the conciseness necessary for each of the many topics, frequently produces the effect of something quite formal. This feeling, however, is not really justified, for there is a positive content; and the difficulty is rather that the author has to assume acquaintance with conclusions established in his previous works.

Some of the more important positions are the following. The highest development of experience depends in all cases, including religion, on the attainment of ideas that can be progressively systematized into a structure of knowledge. Morality is, in the first instance, action controlled by rational schemes, and ultimately by the principle of "the furtherance of the dynamic development of the Universe" (p. 145), which furnishes an objective criterion of good and evil. Faith, which is inferior to knowledge in certainty, yet rests on knowledge and transcends it both for the sake of action and also to gain more knowledge. God is a Supreme Self, personal at least to the extent of permitting communion with man's spirit; and the universe is friendly in the sense that the finest ideals survive as the dominating factors in all human experience.

R. S.

OTHER NEW BOOKS AND JOURNALS

REVUE DE MÉTAPHYSIQUE ET DE MORALE. 41^e Année, No. 2. Philosophie de la Nature et Philosophie de l'Intellect: *E. Meyerson*. La méthode et la notion fondamentale de la théorie pure du droit: *H. Kelsen*. Le culte du "moi" et la culture du "moi" chez Frédéric Schlegel: *J. Rouge*. Les constituants de la matière: *L. Leprince-Ringuet*. Documents inédits sur la vie de Spinoza: *A. Rivaud*. Le gouvernement des démocraties modernes: *M. Lazard*.

ANALYSIS. Vol. I, No. 3. Representation and Expression: *C. A. Mace*. A Propos of "Facts": *M. Black*. Variables: A Reply to D. Sholl: *H. W. B. Joseph*. A Suggestion about Value: *W. H. F. Barnes*. The Meaning of Statements: *Alfred Sidgwick*. Having Instances: *Austin E. Duncan-Jones*.

Goodenough, Florence L.: Developmental Psychology. An Introduction to the Study of Human Behavior. (Century Psychology Series.) New York and London: D. Appleton-Century Company. 1934. xvii + 619 pp. \$3.00.

Tuttle, Harold Saxe: A Social Basis of Education. (Crowell's Social Science Series.) New York: Thomas Y. Crowell Company. 1934. x + 589 pp. \$3.00.

Wright, H. W.: Understanding Human Conduct and Social Relations. Reprinted from the University of Toronto Quarterly, Vol. III, No. 3. April, 1934. Pp. 321-348.

NOTES AND NEWS

Readers will note that in this number the JOURNAL is publishing abstracts of papers read at the meeting of the Western Division of the American Philosophical Association at Indiana University, March 29-31, 1934. Abstracts of papers read at the Association meetings will appear hereafter in place of the reports of the Division meetings and regardless of the subsequent publication of the papers themselves. The JOURNAL regrets that it can not undertake to make abstracts and is therefore limited to publishing only those supplied by the authors themselves. The presidential addresses are not included, since they are published regularly in the PHILOSOPHICAL REVIEW.

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THE JOURNAL OF PHILOSOPHY

WHITEHEAD, DESCARTES, AND THE BIFURCATION OF NATURE¹

WHITEHEAD has assured us that "modern natural philosophy is shot through and through with the fallacy of the bifurcation of nature. . . ."² He protests against "the bifurcation of nature into two systems of reality, which, in so far as they are real, are real in different senses. One reality would be the entities such as electrons which are the study of speculative physics."³ The other reality is that of the "psychic additions" which are furnished to that nature which is the cause of awareness. Unless the fallacy be avoided, Whitehead thinks, a philosophy of nature is impossible.

Whitehead's position, as set forth in the famous chapter in *The Concept of Nature* (to which chapter I confine my attention), is that nature must be accepted in toto. The theory of bifurcation, he says, "is the outcome of common-sense in retreat. It arose in an epoch when the transmission theories of science were being elaborated. For example, colour is the result of a transmission from the material object to the perceiver's eye; and what is transmitted is not colour. Thus colour is not part of the reality of the material object."⁴ Whitehead then argues that the same logic would lead to the exclusion of inertia from the reality of nature. "Thus the attempted bifurcation of apparent nature into two parts of which one part is both causal for its own appearance and for the appearance of the other part, which is purely apparent, fails owing to the failure to establish any fundamental distinction between our ways of knowing about the two parts of nature as thus partitioned. . . . So far as reality is concerned all our sense-perceptions are in the same boat, and must be treated on the same principle."⁵

If I interpret Whitehead's position aright, the philosophy of nature, or of science, is not a philosophy of physics alone. Physics, and all the other sciences, are developed out of a single subject-matter. Nature is the whole field of existence. There may be,

¹ Except for omissions and minor changes in the interests of brevity, this paper is published as read before the Yale Philosophical Club in December, 1933.

² *The Concept of Nature*, Cambridge, 1930, p. vi.

³ *Ibid.*, p. 30.

⁴ *Ibid.*, p. 43.

⁵ *Ibid.*, p. 44.

within Nature, lines of cleavage which we discover, and these lead to distinctions of subject-matter, as, for example, that between the physico-chemical and the biological sciences. I presume that Whitehead admits the presence within unbifurcated nature of characters which explain, at least in part, why a theory of bifurcation arose. His counsel, as I understand it, is that we must not let these characters lead us to a theory of bifurcation, and then, conducted by that theory, return to nature with the tacit assumption that bifurcated nature is Nature. The sciences represent just so many siftings of nature through sieves of different mesh. But the siftings that distinguish, let us say, psychology from physics, are no more fundamental in principle than the siftings that separate off the subject-matter of physics from that of chemistry or biology.

Whitehead's doctrine turns upon a distinction between the philosophy of science (or of nature) and metaphysics. "The primary task of a philosophy of natural science is to elucidate the concept of nature, considered as one complex fact for knowledge, to exhibit the fundamental entities and the fundamental relations between entities in terms of which all laws of nature have to be stated, and to secure that the entities and relations thus exhibited are adequate for the expression of all the relations between entities which occur in nature."⁶ The philosophy of science, avoiding the fallacy of bifurcation, will treat of an undivided nature: of what is given in perception (the whole set of common-sense objects), and of the scientific objects (the electrons, for example) which are the objects of speculative physics. "For natural philosophy everything perceived is in nature. We may not pick and choose. For us the red glow of sunset should be as much part of nature as are the molecules and electric waves by which men of science would explain the phenomenon."⁷ We are told that this position "means a refusal to countenance any theory of psychic additions to the object known in perception"; "... any metaphysical interpretation is an illegitimate importation into the philosophy of science"; "natural philosophy should never ask, what is in the mind and what is in nature."⁸

If this be the philosophy of science, what is metaphysics? Whitehead writes: "We leave to metaphysics the synthesis of the knower and the known," for the metaphysics has a "scope which embraces both perceiver and perceived." We are told, "By a metaphysical interpretation I mean any discussion of the how (beyond nature) and of the why (beyond nature) of thought and sense-awareness."⁹

Up to this point I feel that I have not misinterpreted Whitehead.

⁶ *Ibid.*, p. 46.

⁷ *Ibid.*, p. 29.

⁸ *Ibid.*, pp. 28, 29, 30.

⁹ *Ibid.*, p. 28.

Beyond this point, however, I find a fundamental ambiguity in this definition of metaphysics and consequently in the determination of the province and nature of a philosophy of science. In Whitehead's system, viewed as a whole, this ambiguity may be removed. I limit myself, however, to this chapter on the Bifurcation of Nature. As apology and justification for this limitation I can but record my firm conviction that a philosophy of science which does not begin with this chapter is foredoomed to failure.

It is clear that bifurcation is a fallacy. It is clear that metaphysics alone deals with the problem of the relation of the knower and the known. Metaphysics spans a distinction which does *not* fall within the subject-matter of a philosophy of science. What is excluded from the latter is a distinction which we may call methodological or logical. The bare distinction between knower and known is not in itself a bifurcation either in or of nature. The (fallacious) theory of bifurcation implies a separation: on the one hand we have the perceiver and his perceptions, the self and its immediate experience, sense-awareness and the contents of awareness; on the other hand, we have something called the physical object, the electron, let us say. The bifurcation is a division of existence into two portions.

What, then, is excluded from nature and so from the subject-matter of a natural philosophy? Certainly not questions concerning the red glow of the sunset and its relations to electrons; certainly not those concerning the relations between the contents of consciousness ("psychic additions"), the nature that is merely apparent, and "physical" objects. We are specifically told that we must not bifurcate nature in "the nature apprehended in awareness and the nature which is the cause of awareness."¹⁰ The perceiver's percepts are within nature. The relation of percepts to electrons is a problem of natural philosophy, not (presumably) of metaphysics. On the other hand, as certain texts seem to imply, the relation of the perceiver to his percepts, of awareness to contents, is a matter excluded from a philosophy of nature but pertaining to metaphysics. Nature thus includes everything save the perceiver, the awareness itself, or the experiencer as Dewey would say.

Apparently we confront three distinctions: (1) apparent nature and the cause of apparent nature (sunset and electron); (2) the perceiver and percepts (or awareness and contents); (3) the knower and the known. The first is a distinction *within* Nature, or the subject-matter of natural philosophy; to recognize this is to avoid the fallacy of bifurcation. The second and third distinctions lie beyond the province of natural philosophy. In brief, I can not resist the

¹⁰ *Ibid.*, p. 31.

conclusion that Whitehead implies either that the second and third distinctions are identical, or else that the one intimately involves the other. In either case, these distinctions are a concern of metaphysics alone.

If the second and third distinctions are identical; and if the relation of the knower and the known be a metaphysical question; then metaphysics differs from natural philosophy, and the relation of the perceiver to percepts falls outside of a philosophy of science. If, however, they be not identical, will not the problems concerning the relation of the perceiver to percepts fall *within* the province of natural philosophy? How can the relation between the perceiver and the perceived, between awareness and contents, experiencer and experienced, be excluded from a philosophy of science if perceptions and contents of awareness be a part of nature, the subject-matter of natural philosophy? If what the bifurcationist calls "psychic additions" belong to nature, must not the whole of the so-called "psychical"—even the self—be defined as a part of nature? If nature apprehended in awareness, and nature which causes awareness, together with their relation, be comprised within the subject-matter of natural philosophy, how can awareness itself be omitted? "There is now reigning in philosophy and in science," says Whitehead, "an apathetic acquiescence in the conclusion that no coherent account can be given of nature as it is disclosed in sense-awareness, without dragging in its relations to mind. The modern account of nature is not . . . merely an account of what the mind knows of nature; but it is also confused with an account of what nature does to the mind. . . . It has transformed the grand question of the relations between nature and mind into the petty form of the interaction between the human body and mind."¹¹ This transformation, I take it, is the consequence of the fallacy of bifurcation. To reject the transformation, surely the distinctions and relations involved in the petty form must fall within the subject-matter of natural philosophy; and fall within it, not as definitive of its problem, but as an incident within nature. Presumably, awareness, perceivers, experience, and percepts will be a concern of one or more specialized inquiries, "sciences," before they become a concern of natural philosophy. Every important distinction and relation within nature, exploited by "science," will of course come under the reckoning of a philosophy of science. But the relation of perceiver and percepts would somehow be a problem for science before it becomes a concern of the philosophy of nature.

From the point of view indicated, to which I feel we are driven by Whitehead's insistence upon bifurcation as a fallacy, the meta-

¹¹ *Ibid.*, p. 27.

physical problem of the relation of the knower and the known will not be even partially identical with that between perceiver and percepts, the self and the remainder of nature. A natural philosophy will indeed be "an account of what the mind knows of nature," including that portion which is specifically human. The fallacy of bifurcation arises, not only when we oppose sunsets and electrons, but also when we oppose perceivers and percepts!

Here, you may rightly say, I appear as a reckless and crack-brained Don Quixote, disgracefully without excuse, even that of hallucination, for I know that I am tilting not against a mere wind-mill, but against a very great giant. I must now make a double confession. I am not prepared to indicate what this metaphysical knower may be, and what its relation to the known. I must also confess my incompetence to pursue the problem of the philosophy of science. This, I recognize, is a damaging admission. So far as I can see, the absorbing interest of philosophy to-day—or at least of young philosophers—is natural philosophy. To admit incompetence, then, is quite equivalent, in the minds of graduate students, to a confession that one is incompetent in every philosophic sense. Such an acknowledgment implies a degree of old-fogeyism that proves one's unfitness for an academic post. The situation has proved embarrassing. To have one's students about the seminar table look upon one as a relic, a kind of museum piece, somewhat like a dinosaur perhaps, only not quite so satisfyingly extinct, is a deflating experience. In those halcyon days when I was a graduate student, we quoted Kant and Plato. To-day there is no such refuge. The graduate student refers to Heisenberg, acknowledges mastery of relativity theories, and leaves one humbled by equations. A recent Yale graduate in philosophy is now, I am proud to say, a well-beloved colleague. A kindly and loyal person, he viewed my acceptance of your invitation with misgivings. If you can read a paper on the philosophy of science, said he with candor, accept the invitation; it would, however, be more prudent to decline. I then recalled that bifurcation has a history, and Descartes had much to do with it. My colleague conceded, although with slight abatement of misgivings, that it might be less calamitous were I to retreat to Descartes. And this I propose to do.

Descartes, I believe, wished to accomplish that which Whitehead asserts a philosophy of nature should be. But with Descartes the transformation of the grand problem into its petty form was effected, the bifurcation of nature was formulated, and all of this largely against his own intentions. Within the Cartesian system, and the history of its formation, there is revealed a conflict of the distinctions to which I refer above. There arises, in crucial form,

the question of the relation between the metaphysical distinction and those others bound up with the bifurcation of nature.

Professor Gilson has emphasized—and with justice—the fact that Descartes was amazed by his discovery of what the soul must be in consequence of his own principles.¹² This is fundamental to an understanding of Cartesian doctrine. Descartes, as Gilson points out, experienced difficulty in persuading himself of the truth of his own conclusions. The finding that aroused bewilderment in its discoverer was the nature of the real distinction between soul and body. Descartes, in short, had not anticipated that the soul would turn out to be what in fact it did turn out to be. He recognized that this doctrine concerning the soul emerged as a conclusion. It was *not* the foundation of that movement of inquiry to which the written *Meditations* give expression. The dualism of soul and body, in the specifically Cartesian sense, is thus a result, a terminus, a point of view achieved. Descartes recognized clearly enough that it occupies this position. The question as to whether the thing that thinks is corporeal or not, he declares, he “left wholly undetermined until *Meditation VI.*”¹³ Moreover, Gilson points out that the thesis concerning the distinction of body and soul is posterior, not anterior, to the *Meditation* of October, 1628, to July, 1629, a meditation consecrated to the elaboration of a new metaphysics.¹⁴ Gilson’s account¹⁵ of the development may be summarized as follows: After Descartes’ first intuition of the unity of science and of his mission to establish it, he devotes nine years, after 1619, to inquiry in physics. Detaching his problems from the Aristotelian physics which had become doubtful to him, he prosecuted his work as physicist, with no attention to metaphysical problems. So far, then, Descartes is physicist and mathematician, but not philosopher. But Descartes was nothing if not one to whom every limited problem must be widened. In 1628–1629 he determines to erect a new metaphysics—a metaphysics, on the one hand, of the science he had in fact pursued for nine years; a metaphysics, on the other, for that same science. Because Descartes was Descartes, he felt the need of this. It is at the conclusion of this long pursuit that he attains the real distinction of soul and body. This finding, says Gilson, “was there, under his eyes, constraining for his thought, since it was he himself who had arrived at a deduction of it by a chain of necessary reasons,

¹² *Études sur la rôle de la pensée médiévale dans la formation du système cartésien*. Paris: Vrin, 1930, pp. 165–166.

¹³ *Philosophical Works of Descartes*, trans. by Haldane and Ross, Cambridge, 1912, Vol. II, p. 63; cf., Vol. I, Med. IV, p. 176. All references to Descartes, unless otherwise specified, are to this translation.

¹⁴ *Op. cit.*, pp. 165, 151.

¹⁵ *Op. cit.*, pp. 149 ff.

and yet he was not prepared to admit the force of his own proofs." ¹⁶ In the light of this, how can we doubt that the specifically Cartesian dualism was not only a new doctrine for the world, but a novelty for Descartes himself. He faced a conclusion he was constrained to accept, but of which he was not "persuaded."

If we give all of this its full value, we must distinguish between an earlier and a later Descartes, between the thinker that embarked upon the adventure of doubt in order to construct a metaphysics for science, and that other Descartes whose adventure brought for him an inescapable conclusion which demanded, to his own astonishment, the bifurcation of nature. Doubtless I am making the distinction more rigid than it was in the vital process of reflection. The written records—the *Meditations*, for example—do not portray the order of discovery. Here and there in Descartes' writings are evidences that conclusions are anticipated, and when conclusions have been explicitly recognized there occur reversions to earlier stages in the train of thought. Descartes must have known from the beginning how matter-substance would be defined. In his work as physicist, and perhaps in the work of others, he may have perceived that a new concept of matter was involved. To determine metaphysically the character of a universal science of nature constituted a problem suggested by his own procedure. Granting these and similar qualifications, the distinction between the initial program and purpose, and the terminal standpoint, remains fundamentally sound.

Let us first examine the initial program. Descartes' methodological procedure and its immediate results do not and could not involve the bifurcation of nature. The distinctions upon which bifurcation rests—between psychic addition and that to which addition is made, between consciousness and contents, the self and nature—are resultants. I recognize that the *Cogito* leads immediately to the definition of a substance whose whole essence is to think. However, while the writer of the *Meditations* may have imported into this definition what does not belong there, the philosopher did not. In the *Second Meditation*, as we all know, the thing that thinks is said to be a thing which doubts, understands, affirms, denies, wills, refuses, imagines, and feels. In brief, the thing that thinks is identified with the whole range of what we have come to call psychological processes. But Descartes expressly states that, in strict logic, he could not determine until the *Sixth Meditation* whether the thing that thinks is corporeal or spiritual; this clearly implies that this determination is logically a resultant. It was indeed the result that astonished him. Now I hope to make clear that, until the soul could be determined as to its spiritual or corporeal nature, it was logically impossible for

¹⁶ *Op. cit.*, pp. 165-166.

Descartes to declare, before the *Sixth Meditation*, that the thing that thinks is a thing that not only understands, but also imagines and feels. The writer of the *Meditations*, not the strict logic of the philosopher's reflection, is responsible for such statements in the earlier *Meditations*.

May I lead up to the matter in another way? Descartes' followers began where Descartes left off; but Descartes himself did not. The distinction of soul and body was a commonplace of the history of thought. Descartes inherited the terms and any number of meanings attaching to them. But this is quite unlike saying that Descartes inherited the Cartesian terminal dualism of soul and body. The *Cogito*, I would maintain, must be interpreted with all of this in mind. When Descartes turns from physics to metaphysics, he envisages the unity of science and perceives the primacy of the problem of method. In the *Rules for Direction*, the Cartesian program lies before us. The first step concerns method. Within the *Rules* the distinction of body and mind, the corporeal and spiritual, appears. In the main, however, his use of the terms is conventional rather than functional and technical. It is said that "the power by which we are properly said to know things, is purely spiritual, and not less distinct from every part of the body than blood from bone, or hand from eye."¹⁷ How could the later Descartes have used such a comparison? Moreover, the same paragraph makes clear that he is thinking of the knowing function, the "single agency" that knows, the "inborn light." To call mind spiritual, and to distinguish it from the corporeal, had been done in a dozen different contexts of thought long before Descartes. Many of his contemporaries had difficulty with Cartesianism just because this distinction was verbally a commonplace and they could not comprehend the radically new meanings which Cartesian results gave to the terms. In short, in the *Rules*, in the *Discourse*, and logically in the beginnings of the inquiry expressed in the *Meditations*, the distinction between mind and the corporeal operates within a methodological context. It is employed in facilitating the central disclosure, that "all knowledge is of the same nature throughout, and consists solely in combining what is self-evident."¹⁸

The methodological doubt must surely terminate, if it terminate at all, in a methodological principle. Now the *Rules* reduce knowledge to self-evidence. Thus the primary postulate of Cartesianism is affirmed: the ultimacy of rational self-evidence. Moreover, the nature of method is disclosed by the postulate itself. But self-evidence itself must be made evident, and ontological validity of

¹⁷ *Rules for Direction*, Vol. I, p. 38.

¹⁸ *Ibid.*, p. 47.

rational self-evidence must be established. If this be not done, method may be an idle game, and mathematics a mere *jeu d'esprit* without the sacramental efficacy that my graduate students tell me it possesses. In other words, mathematics is one thing, but a mathematical physics is another. Thus the problem of the *Meditations* is clear. Can it be made evident that self-evidence is the criterion of certitude? And can it be shown that this obtains, not merely for a game, but for the serious business of a universal science of nature? The method of doubt is the procedure whereby the very meaning of self-evidence is to be revealed; theology is to insure the competence of mind to know, not essences alone, but nature; and finally metaphysics, based upon that theology, is to reveal to us what is this nature, this subject-matter for science. In this way alone, for Descartes, can we arrive at the grand problem of what the mind knows of nature.

This, I believe, implies that, initially at least, the *Cogito* is the disclosure of mind to mind, the self-revelation of the rational ego. It is the discovery of the primacy of the knowing subject, with the recognition that certitude can not reside in un-bifurcated nature and can not be obtained by animal commerce with things. The *Cogito* reveals that reason is the course of its own luminosity.

The *Cogito* thus terminates a methodological doubt by the recognition that the source of doubt is the source of certainty. It makes evident that inquiry can not question its own principle—and this is so true that it makes possible a demonstration of the existence of God. It is in this sense, I suggest, that doubt terminates in the revelation of a metaphysical reality whose whole essence and nature is thought. Metaphysical inquiry thus begins with the acknowledgment that the inquiry itself implies a distinction between the knower and that which is to be known. It begins, if you please, with a substantial reality, a spiritual substance, as well as a principle of certitude. It is my essence to think; I am a thinker, and so am spiritual. But if I can *not* know, until after God's existence has been demonstrated and the metaphysical foundations for a science of nature have been laid, whether the thing that thinks is corporeal or not, how can the *Cogito* imply more than mind in an objective sense?

Brunschvicg somewhere remarks that even with Descartes *Ego sum* degenerated into *Ego sum Cartesius*. Santayana would say, I believe, that the whole history of modern philosophy is a deplorable consequence of this degeneration. The *Ego sum* is the beginning of theology and metaphysics; that this *Ego* is *Cartesius* purports to be a conclusion established by an inquiry which terminates with a startling bifurcation of nature. *Ego sum*: this implies mind; but not the soul that inhabits an animal body, if I may use Santayana's

phrase.¹⁹ This *Ego* can not be a part of the subject-matter for scientific inquiry or for a philosophy of nature, for it is assumed in every inquiry. Its spirituality is defined by this fact.

So far, I think, Descartes should win the approval of Whitehead. Metaphysics will be concerned with the relation of the knower and the known, and theology must ground the validity of the relationship. Nature is subject-matter for all inquiry having finite existence as its object. A philosophy of nature would return to metaphysics an organized subject-matter, the known.

But how does this mind that knows, this metaphysical subject, this thing whose whole essence and nature is to think, become *Cartesius*? How does it become, not thought, but thinking? And not thinking alone, but imagining, feeling, sensing? How does it come to be identified with a conscious self, and the thing that thinks become a self with all of its immediate experiences? That this change takes place, that Descartes' own metaphysics seemed to demand this consolidation, is surely what astonished our philosopher, constraining him to an acceptance to which he could not be persuaded.

To recognize how and why Descartes was so constrained is important, not merely for the interpretation of history, but for those philosophers of science who would follow the counsel of Whitehead. The crucial fact involved was *not* an initial conception of spirit or spiritual substance. On the contrary, the vital factor was the definition of material substance. This definition, to the followers of Descartes, was a new Gospel of science, and a final truth.

After the rational enterprise had been validated by theology, reflection returns to the subject-matter within which doubt had found no stilling of disquietude. The whole of nature, both the external and the internal world, had been infected by doubt. We can not follow here the details of the restoration. It is sufficient to observe that all experience must be subjected to the test of the concept of matter substance. In the *Rules*, it was said that "Matter of experience consists of what we perceive by sense, what we hear from the lips of others, and generally whatever reaches our understanding either from external sources or from that contemplation which our mind directs backward on itself."²⁰ Subject this "matter of experience" to the concept of matter, an astonishing result emerges.

¹⁹ I would like at this point to make acknowledgment of my obligation to Professor F. J. E. Woodbridge, and especially to his paper, "Mind Discerned," this JOURNAL, Volume XVIII (1921), pp. 337-347. My present contentions are stated in that article in the following sentence: "... the world of material objects and the mind which inhabits animal bodies lie, as it were, discriminated in a single universe of discourse and may be subjects of thoughtful inquiry even if such inquiry may seem never to occur except with the presence of some animal body with a mind inhabiting it" (p. 338).

²⁰ *Rules*, pp. 43-44.

Nature—all of Nature, all of that which mind is to know—is bifurcated! Two natures, not one, are revealed. The one is that which is in essence extension. Nothing irreducible to extension can properly belong to it. This nature—I now omit a capital letter—may be called physical nature, or the external world, provided that the human organism be comprised within the meaning of the expression. There remains, however, a large share of all that Nature, that subject-matter for inquiry, within which thought could find no release from doubt. This portion constitutes another nature, another order of existence, because whatever it is, it is not in essence extension. The distinction of mind and body, soul and corporeality, spirit and matter, lay at hand. Descartes now perceives—it is the moment of his bewilderment—what mind, spirit, soul, must be. The thing that thinks is the only haven for all that matter excludes. What must be done with awareness and its content? With perceptions and the perceiver? What with sensation, passion, pleasure and pain, with the derivatives of sense in imagination and memory? Excluded from one nature they can but fall within what tradition called mind or soul. At this point, then, at the end of the *Sixth Meditation*, we can tell whether the thing that thinks is corporeal or not. It can not be, for the constitutive essence of matter is extension, and pleasure, pain, memory, passion, judging, and erring can not be reduced to extension. Thus the thing that thinks becomes Cartesius.

What, then, is the constitutive essence of the thing that thinks? It was said to be thought; it is still said to be thought—but with what difference of meaning! In the beginning of our enterprise, thought was rationality itself. Its very nature was that it possessed the properties of clearness and distinctness, of rational self-evidence. We have discovered, however, that sense and passion must cohabit with thinking processes a single substantial entity. But desire, sensation, feeling, are precisely what thought (in the first sense) is not. They are hopelessly obscure, indistinct, unfitted, so far as we can now perceive, for any rôle in the rational enterprise. Is it not obvious that the common denominator for the contents of the soul can not be thought, the idea as possessing clearness and distinctness? We are concerned now with Cartesius; and Cartesius is a self-consciousness, and thought must mean the immediacy of consciousness.

Given this definition of matter, then, physical nature is defined. Life is necessarily reduced to mechanism. Most astonishing of all, the animal soul and the rational soul are one in essence. The thing that thinks is even the thing that suffers pain. All of the souls that man once had—the nutritive and reproductive, the sensitive and locomotor, the imaginative and the rational—reside somehow within one substance and are equally remote from corporeality. The meta-

physical subject is entangled hopelessly with the thing that enjoys the red glow of the sunset and toothaches—but not the electrons. The thing that contemplates essences is in principle identical with the thing that possesses animal fears and passions.

This startled not Descartes alone. The Princess Elizabeth was sceptical. So was everyone—save the Cartesians who began where Descartes ended. The effect of the doctrine was extraordinary. Louis de la Forge,²¹ for example, splendidly expresses how Cartesians thrilled to this new Gospel. He declares that no man before Descartes knew what mind or soul is. Even St. Augustine, he avers, merely approximated the truth, that is, the Cartesian doctrine. La Forge, moreover, knows precisely why St. Augustine failed to grasp the truth concerning soul or spirit: he failed because he did not possess the true, i.e., the Cartesian, definition of *matter*. Again, the prolonged controversy over the Animal Soul is precious evidence of the novelty of the doctrine. To subscribe to the automatism of animals became a test of fidelity to the revolutionary party, to the party of the “*novateurs*.” Pierre Sylvain Régis, for example, will stand for no nonsense. A soul is a soul in the Cartesian sense, or it is nothing. Therefore, either animals, having souls, have Cartesian souls—spiritual substances the essence of which is thought—or they haven’t any kind of soul whatever. The protests of the School were futile: the sweet simplicity of distinguishing man from animals by allowing to animals the sensitive or even imaginative soul while depriving them of the rational soul was to the Cartesian an idle fancy. The consequences of automatism were bad enough; for Cartesians, however, the consequences, especially the theological, of allowing animals Cartesian souls, were even worse.

Gilson’s statement²² to the effect that there is no trace of a critique of substantial forms before Descartes formulated his metaphysics reinforces my emphasis upon the critical rôle of the concept of matter. Substantial forms had been eliminated, in fact, from his pursuit of physics; but the critique came with and after the metaphysical reflection. The reason is apparent: the critique turns upon the consequences of the new definition of matter and therefore upon the new definition of spirit. A substantial form, following upon the bifurcation of nature, must be one of two things: it is either a con-figuration, essentially geometrical, within extension, or else it is an idea, that is, a percept within the soul. In neither case is it a substantial form in its traditional sense. The Cartesian metaphysics defines a radically new context for inquiry into the world. The

²¹ Cf. “Louis de la Forge and the Critique of Substantial Forms,” *Philosophical Review*, Vol. XLI, No. 6, December, 1932.

²² *Op. cit.*, p. 150.

Cartesians made fun of the notion, not so much because it was false as because it was a mythical monster.

It should be remarked that the Cartesian bifurcation engendered what may be called secondary bifurcations. Within the soul, the clear and distinct idea, knowledge, stands opposed to the irremediable unclearness and indistinctness of the sense-derived "idea." Initially, Descartes regarded sense and imagination not as knowledge functions, but rather as animal powers to which the "single agency" could be applied. To this position he reverts. What occurs in mind is said to be the "pure thinking of a thing"; no corporeal semblance can be received in mind, while imagination, he declares, "requires the presence of a semblance which is truly corporeal."²³ One and the same faculty "in correspondence with those various functions is called either pure understanding, or imagination, or memory, or sense."²⁴ In such contexts, mind is restricted to understanding, and this would be the constitutive essence of the thing that thinks. Even in the *Replies to Objections* he declares: "... the power of imagination which is in one, inasmuch as it differs from the power of understanding, is in no wise a necessary element in my nature, or in the essence of my mind."²⁵ If imagination requires a corporeal semblance, but such semblance can not be received into the mind, imagination itself must be a wholly corporeal function. But Descartes with equal force, in other texts, doubles every function. Imagination and sense are used in two senses, the one wholly spiritual and the other wholly corporeal. In this case the opposition of the clear and distinct idea to the unclear idea falls within the soul substance itself. The soul then has a multiplicity of functions, not one. Thus sensation and perception, and everything originally associated with the corporeal, had fallen within the sphere of the subject-matter, the object of doubt. Now it falls within spirituality and outside of corporeality. Percepts have become psychic additions, and the thinker has become a perceiver. Prior to the bifurcation, the obscurity of sense—or of the substantial form, if you will—could be blamed upon Nature, not the pure flame of spirit. But now a paradox arises: the inner or natural light, the spirit that provided the very standard of clarity and the criterion of certitude, is also the very producer of darkness. Or, at any rate, the power to produce clarity and the power to produce darkness dwell within one substance and partake of one essence. For Descartes this was a monstrous result, and he sought escape. In vain, however; and the evidence lies in those texts where he reluctantly confesses that all

²³ Vol. II, *Obj. and Replies*, V, p. 231; cf., p. 232.

²⁴ Vol. I, *Rules*, p. 39.

²⁵ Vol. I, *Med.*, VI, p. 186.

ideas are innate.²⁰ The admission is, strictly speaking, inescapable. For his bifurcation made it impossible to account for sensations and percepts and passions in terms of physical nature. I can not enter into details concerning Descartes' hesitations. The net outcome, however, must be that whatever happens within the soul happens because of the soul; and therefore the soul contains both the power to produce the clear and distinct idea, i.e., the innate ideas which are the first evocations of inquiry, and also a power, or faculty to produce sensation and feeling. Paradoxically, physical nature turns out to be wholly penetrable by mind, and physical science may even become dogmatic. But the soul contains dark and impenetrable recesses; we must have two, not a single science of nature, for there are two natures, and to the unhappy psychologist falls that nature which contains all darkness and unholiness.

The bifurcation causes the center of gravity of the system to shift. The problem ceases to turn upon the clear idea and the inner natural light, and becomes defined by the paradox of sense. Theology now has more to do: it must ground the fact that good sense, the universal principle, somehow cohabits with a principle of subjectivity. The followers of Descartes perceived this even more clearly than the master.

The shift may be described as follows: The initial program demanded a theological ground for the objective validity of the criterion of truth. The famous Cartesian circle ensued. The argument to God depends upon the criterion of truth. The existence of God furnishes the basis for the validity of the criterion. Mathematics is thus assured. Moreover, given in addition an innate idea of matter, a mathematical analysis of the idea of extension is assured. Creation has its source in a rational being. It is a valid presumption that a mathematical science of extended nature is possible.

The situation, however, is not quite so simple. It may well be the case that *some* one mathematical account of physical nature will be valid. But which one? How is mathematics to be specifically attached to nature? Let us fall back, for a moment, to the process of validating the common-sense belief in an external world. More accurately stated, the belief in question is a belief in an independent order, suggested by our experience. Strictly speaking, common-sense belief is not validated; rather, a rational God justifies a conclusion that the common-sense belief, in all its obscurity, rests upon a real fact that the belief itself does not comprehend. In fact, this order, this independent world, is quite other than common-sense experience would suggest. For it is an innate idea, the concept of

²⁰ Vol. I, *Notes Against a Programme*, pp. 442, 448; Vol. II, *Obj. and Replies*, p. 73. Adam et Tannéry Edition of the *Oeuvres*, Vol. III, Letter CCXLVIII, p. 418.

matter, which defines this independent order. The previous failure of science was due just to the assumption that the order of nature is given in sense-experience. The *Reply to Objections* VI gives eloquent testimony to the importance of this point. The concept of matter divides Nature—not sense-experience, but Nature—into two parts; and only one part is genuinely external and objective. The other part of Nature is paradoxically disclosed as not a part at all. The common-sense world and common-sense belief have been transcended; and sense-experience is to be recognized as subjective, dependent upon the perceiver, and as in essence spiritual.

What, now, is the problem? We have the criterion of truth. Since the concept of matter is innate, and is clear and distinct, and since it defines external nature, that nature is in principle penetrable by mind. But physical nature is not all of what experience provides as Nature. The belief in an independent order also contains the belief that sense-experience is bound up with it, related to it. *This* common-sense belief has not yet been validated. Common sense admits not merely that there is an external world; rather, it insists that this external world is a particular world, full of particular things, an order within which a multitude of things differ each from the other in specifically different ways. A science that is faithful to this multiplicity and cognizant of these specific differences, and only such a science, will be a science of real existence, a physics. In short, if we can not relate sense-experience in the soul to a corresponding diversity within the external physical world, the unity and integrity of knowledge is a vain dream. The facts will persistently suggest that God is a deceiver. Therefore God must be proved non-deceiving in a new sense.

What must now be theologically justified is a belief in a systematic correlation between subjective sense-experience and sets of events within matter-substance. Everything depends here upon the term, "systematic correlation." A new crisis appears. Knowledge is a matter of clear and distinct ideas. These ideas must be applied to physical nature in such a way that the employment of these ideas will involve modifications in specific correlation with the specific configurations of real extension. But sense-experience, despite its unclarity, alone can point to specific configurations within matter. Here is a paradox: the unclarity of sense-experience unfits it for knowledge; but without sense-experience there is no way of carrying over a mathematical exploration of extension so as to reckon with the specific details of the physical order. There is no physics of the red glow of the sunset; yet without that red glow the sunset can not be a specific problem. Finally, escape through appeal to causality is debarred by bifurcation. The red glow is *not* caused by

configurations in the extended sunset. Whatever miracles the pineal gland may accomplish, it can not accomplish this, and Descartes' followers saw the futility of this solution. The red glow comes from an aboriginal function of spiritual substance, but not from matter.

In a magnificent text of the *Rules*,²⁷ we are told that the infinitude of figures "suffices to explain all the differences in sensible things." Here is the very ideal of a mathematical physics. But two realms—no, three realms—are distinguished in this formula. First, the mathematical, inexhaustibly rich in essences; second, sense-experience, inexhaustibly rich in diversity and unclear and indistinct ideas; and third, the realm of material existence. We know the first; we immediately experience the second. What of the third? We have an animal conviction of its diversity in correspondence with the diversity of sense-experience. How can the conviction be given a scientific value? A mathematical science of matter implies the pursuit of sense-experience in its diversity so that we may arrive at relevant applications of geometry to real differences resident within the material world itself.

The point must not be misconceived. That there should be diversity within sense-experience and diverse configurations within matter this, in itself, means nothing. That something happens in the soul-substance, and that there are events in physical nature, guarantees nothing but conjecture. The critical question is whether these diversities are systematically correlated. The problem is whether a given happening in the soul is correlated, systematically, specifically, and universally with just a certain constellation of conditions, and no other, in matter.

Descartes' followers were painfully conscious of the problem. Clauberg,²⁸ for example, makes the question central. The question is not one of relating the soul to a world external to the human body. Since that body is a part of matter, the correlation concerns immediate experience within the soul and the net outcome in the brain of all causal processes involved. Two outcomes of two wholly disparate constellations of conditions are involved: are they specifically and systematically correlated? If not, human experience is a monstrosity, physics is impossible, and common belief is groundless. Thus the grand problem turns into the petty one. And the solution of the petty problem must be, and can be only, theological. Sunsets display many colors. But the colors tell us singularly little concerning the electrons involved. Clauberg perceives that if the colors be in the soul, Providence alone can guarantee the systematic correlation of specific immediate experiences with equally specific

²⁷ Rule XII.

²⁸ Cf. "Clauberg and the Development of Occasionalism," *Philosophical Review*, Vol. XLII, Nov., 1933, and Vol. XLIII, Jan., 1934, especially pp. 48-58.

events outside of consciousness. Clauberg, like other Cartesians, ends the problem with a declaration of faith. God has "proportioned" the body and the soul one to the other. There is a mutual suitability of the (human) soul to the (human) body. Divine laws determine the correlation of events. If only we could translate these laws into equations, what comfort it would give the graduate student! Equations or not, however, the Cartesians testify that God alone can overcome the bifurcation of nature. The followers of Descartes, beginning where he left off, perceived that the meaning of the method of doubt and the rôle of theology must alter their significance when nature has been bifurcated.

Despite my colleague's kindly advice, I return to the question with which I began. How can a philosophy of nature reject the bifurcation of nature unless it absorbs within its field the questions concerning relations between perceivers and perceptions? Must not Cartesius lie within nature? If we are to have both metaphysics and a philosophy of nature, will the line of demarcation not fall between the clear and distinct idea on the one hand, and that massive totality of existence which includes everything that Descartes found doubtful? If we do not bifurcate nature, not only the electrons and the red glow of the sunset, but also that animal soul which enjoys the sunset, will fall within nature.

Whitehead says somewhere that matter is not the name of a substance, but the name of a problem. If we avoid the fallacy of bifurcation, must we not urge with equal insistence that the soul—the "psychical"—is equally not the name of a substance, but of a problem? Reflection finds within experience distinctions that suggest problems, and the distinctions between awareness and content, perceivers and perceptions, are significant cases. If we follow Whitehead's counsel and avoid the bifurcation of nature, will not these distinctions be discriminations within a single universe of discourse?²⁹ By following this counsel, the philosopher of science may attack the grand problem of what mind knows of nature; and in the enterprise he will be following the leadership of both Descartes and Whitehead.

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²⁹ Cf. Note 19.

BOOK REVIEWS

The Theory of Knowledge and Existence. W. T. STACE. Oxford: Clarendon Press. New York: Oxford University Press. 1932. Pp. xii + 455. \$6.00.

In this comprehensive and ingeniously developed epistemological essay, Mr. Stace proposes "to trace out the logical steps by which the mind, starting from what is given, arrives at and justifies its belief in an external world" (p. 27). The logical and historical orders are recognized as distinct but, since "logic is the soul of history," the author is confident that the development he outlines represents "not the ingenious logic-chopping of an idle philosopher, but the laying bare of the living tissue of human thought, the ideal history of the human mind" (*ibid.*). After a preliminary criticism of pragmatism Mr. Stace turns directly to the given, which he finds to consist solely in the presentations and activities of the "self-enclosed, solitary mind" (p. 130). Rejecting appeals to faith and instinct as inconsistent with the thoroughgoing rationalism of philosophy, and dismissing all pretended inference to unperceived existences (except in the privileged case of other minds) as lacking "the faintest trace of probable reasoning" (p. 96), he describes the world of science and common sense as having "constructive existence," created by our minds. The steps in this construction, its basic identity in common sense and science, and the special features of its application to various types of knowledge, are then fully discussed in chapters on space and time, logic and mathematics, the categories and the empirical sciences. A final discussion of truth and error sums up and clarifies the central theses of the book.

Apart from the fullness and empirical detail of its analyses, to which a brief review can not do justice, a main value of this book seems to me to lie in the thoroughness with which Mr. Stace has developed and made explicit an epistemological standpoint, which, though frequently adopted by eminent scientists and logical positivists, has hardly as yet been fully elaborated or understood. And the doubts and difficulties which many of us have felt about that standpoint seem to me to find here ample justification. I shall mention three such difficulties since they indicate fairly clearly the issues that Mr. Stace's vigorous presentation will inevitably raise. (1) The indubitable given, which is to serve as solid groundwork for further construction, leaves the epistemologists almost as isolated and "self-enclosed" as the solitary mind from which he starts. Hardly a statement made about its evident character would not be contradicted by some or even most contemporary theorists. That the same immediate objects can not be present at once to the minds of two individuals is denied by Whitehead, Perry, and Hocking.

G. E. Moore sees an act of awareness where Mr. Stace sees none, and Mr. Stace directly observes a variety of mental acts where William James and his followers found none at all. The self-inclosed experience, which is here solid fact, is for John Dewey the merest figment of academic imagination. And so on. It may be that Mr. Stace is right in all these matters, and even evidently right, but as a starting point less concern for certainty and more for social agreement would have foreshadowed a more socially sharable conclusion. As it is, nothing seems more dubious than the indubitables of epistemology.

(2) The device of "mental construction" offers no more than a verbal justification for that belief in the external world which is presupposed, not only by the common man, but by Mr. Stace himself, in his appeal to evolution, the history of human life on this planet, the biological necessities which dictate the "selection" of truths and the like. We are told, to be sure, that "we must conceive that it is true that there is an independent external world, that things exist when no one is perceiving them, that the penny that you see is the same penny as the one I see, that the table which I touch is the very same table as the one I see" (p. 161). But this "truth," we soon discover, is no truer than an alternative and contradictory "construction" would have been if it had suited our purpose to adopt it (p. 284). The very notion of a "common" penny (or other external object) involves a contradiction which can only be condoned when we realize that "contradictions may well exist in makeshift ideas which the mind invents for its own purposes" (p. 153). And the admission of *any* unperceived object "is, after all, only a supposal, a make-belief, a pretense which has been entered into for the purpose of enriching life and knowledge" (p. 441). To be sure such "constructive existence" is still held to be not less "solid, real and permanent" than on any other theory. "But solidity, reality and permanence are themselves mental constructions" (p. 389). Such reassurance is hardly more comforting than that of the advocates of fiat money, who promise not only to "construct" a currency, but to "construct" its soundness as well. In each case the claim to validity involves a reference to a more than "makeshift" security beyond the construction itself. In Mr. Stace's theory the only check on undue inflation of our intellectual currency is that provided by "the given" and the laws of logic—no very rigorous requirement since the given presents only "the fleeting phantasms" of a private world (p. 130) and, as seen above, considerable logical latitude is permitted to constructions. "Truth" and "knowledge" with no firmer basis than this lose much of their significance.

(3) There remains, however, our assurance of other minds as having not merely "constructive" but factual existence. I am not, of course, inclined to doubt the existence of other minds, but I can not think that Mr. Stace has put the case very convincingly. In rejecting the validity of inference to an external world, he asserts categorically that "you can not by any logical acrobatics escape from the absolutely fundamental principle that no amount of perceiving things, whether they are objects, presentations, causal sequences, or anything else, can ever prove that anything exists unperceived. . . . All belief in unperceived existence must be, not an inference, but a mental construction" (pp. 127-128). Since the belief in other minds is a belief in unperceived existence, grounded on an analogy from observed presentations, and since it is an inference, not a mental construction, its position in his system is anomalous. Moreover, the analogy rests not on a similarity between our bodily behavior and that of others, but on similarity in the behavior of *groups of presentations*, and at the stage where, on this theory, the inference must be justified, the perceiving mind has no idea that anything goes on existing when it is not being perceived (p. 71). To associate with such purely private groups of presentations an unperceived and independently existing mind seems hazardous indeed.

It is, of course, unreasonable to expect a theory of knowledge to give us simple answers to highly complex and puzzling questions. Doubtless any "justification" of our knowledge of other minds and of nature will have its difficulties. But those difficulties need not be complicated by assuming a "self-enclosed, solitary mind" and they can hardly be met by "constructions" which "suppose" a fictional external world while they presuppose a factual one. An escape from subjectivism into a make-believe universe is hardly more than a make-believe escape.

A. E. M.

A Study of Locke's Theory of Ideas. SAMUEL MARTIN THOMPSON. Monmouth, Illinois: Commercial Art Press. 1934. 91 pp.

This study of Locke was a doctoral dissertation at Princeton. It is a careful, thorough, and useful piece of work. Part I, after restating the oft-noted ambiguity in Locke's use of the term "idea" which stands sometimes for the object apprehended and sometimes for the apprehension of objects that are not ideas at all, advances the suggestion that the ambiguity may be fairly treated as akin to Descartes' distinction between the formal and objective reality of ideas. That is, whereas ideas exist as psychological facts distinct from objects, they may be identical in content with the qualities of

the objects to which they refer. Part II traces three theories which Locke advanced at different times of the relation of ideas of sensation to objects. One is the "uncritical common sense" according to which ideas are identical with the qualities of objects. Another is the famous theory of chapter 8 of Book II of the *Essay* which distinguishes between primary and secondary qualities. This second theory seems an intrusion in Book II; it was absent from the early draft and seems to have been suddenly added by Locke because he had come to suspect the adequacy of the more naïve discussion in the earlier chapters of the Book. Then a third theory is the "agnostic realism" which is not explicit in the early draft, but is conspicuous in the later parts of the *Essay* and gives the tone to the concluding Book IV. That this agnostic outcome was a theoretically troublesome matter to Locke (as well as a practical annoyance) is indicated by some turns of phrase in important passages. For example, four sections of the early draft (32-35) which are concerned with the way in which ideas apprehend objects as they really are are absorbed into the *Essay* in sceptical fashion: most of the material went into the chapter on maxims which Locke definitely denied to be concerned with real existence, and the rest went into the early part of chapter 11, of Book IV, but was succeeded there by more sceptical sections (pp. 78-79). Or, the abrupt ending in chapter 1 of Book IV to Locke's mention of knowledge of real existence, unlike the longer discussion of the other three sorts of knowledge, suggests that Locke found himself unable to carry out his own theory consistently at this point (pp. 67-68).

S. P. L.

Spinoza nel Terzo Centenario della sua Nascita. (Pubblicazione a Cura della Facoltà di Filosofia dell'Università Cattolica del Sacro Cuore.) Milan: Società Editrice "Vita e Pensiero." 1934. 210 pp. L. 12.

Three times in the past ten years, Fr. Gemelli has edited a volume of essays commemorative of centenaries of modern philosophers. In the Introduction to the volume prepared for the third centenary of Spinoza's birth, he writes that editor and essayists were motivated, in the case of Spinoza, by the same purpose as led them to celebrate the second centenary of Kant's birth and the first centenary of Hegel's death. To the mind of Fr. Gemelli, Spinoza, like Kant and Hegel, is one of the founders of modern philosophy. He helped to initiate the movement that has turned from the only way, luminously indicated in the Perennial Philosophy, which leads to a knowledge of God. As in the earlier works, the studies of Spinoza are not celebrations of new-found visions and truths, but diagnoses of doctrines and issues that mark crucial antitheses between Spinoza and a truth from which he departed.

S. Vanni-Rosvighi ("La teoria spinoziana della sostanza e la metafisica tomistica," pp. 7-20) argues that Spinoza and Thomas both admit the existence of a substantial reality as evident, but Spinoza supposes that the human intellect can comprehend the definition of God, and he is led to pantheism by his identification of substance with the Uncaused, whereas Thomas is saved from these errors by his denial that man knows what God is and his *a posteriori* approach to God's existence. Paolo Rotta, who recently wrote a work on Nicholas of Cusa, traces ("Il Cusano e lo Spinoza," pp. 21-31) the influence of Cusa on Spinoza by way of Spinoza's supposed knowledge of Bruno, evidence for which Rotta finds in the dialogues of the *Short Treatise*. Mariano Campo ("Spinoza e Kant," pp. 33-84), after first restating Kant's criticism of Spinoza in respect to the doctrine of freedom and dogmatism, plunges into the voluminous literature concerned with the relation of the two, turning particularly on naturalism, pantheism, immanence, and deduction in the philosophy of Spinoza. Leonida Gancikoff ("Aporie del panlogismo," pp. 85-98) finds similar, though distinguishable, attempts in Spinoza and Hegel to reconstruct the system of reality logically by means of the principles and categories of the human mind: for Spinoza this consists in a logical deduction of the multiplicity of things from a divine, immobile, and eternal substance; for Hegel it consists in the activity of Spirit, in the logical development of the Idea. Umberto A. Padovani ("Schopenhauer, Spinoza e il panteismo," pp. 99-116) works out the influence of Spinoza's monism on Schopenhauer. Paolo Rossi ("La fisica spinoziana e la fisica moderna," pp. 117-131) finds the attempt of Spinoza to apply the geometric method to mechanics premature in the chaotic state of empirical knowledge in the seventeenth century, and in particular he controverts, with experiments, the conception of impenetrability expressed in Spinoza's *Principles of Descartes' Philosophy*. The relation of Spinoza to later schools of thought is treated by Carlo Mazzantini ("Spinoza e l'idealismo contemporaneo," pp. 133-148), and his philosophy of law by Guido Gonella ("Il diritto come potenza secondo Spinoza," pp. 149-180). Sylvio Vismara ("La nullificazione della storia nella filosofia dello Spinoza," pp. 181-193) develops the thesis that the metaphysics of Spinoza, with its doctrine of divine causality and necessity, renders impossible the conception of history as process, and he finds illustration of his thesis in Spinoza's treatment of the history of the Israelites in the *Tractatus Theologico-Politicus*. Finally A. Bestetti ("La vita di Spinoza in rapporto al suo pensiero," pp. 195-210) discusses several crucial doctrines of Spinoza's metaphysics and ethics, interrupting the exposition from time to time to tell a few of the events of

Spinoza's life (contrasting it with the lives of Augustine, Francis, Benedict, and other Christian saints at important points) with the apparent intention of explaining the doctrine by the life.

The Spinozist will derive little comfort from this volume dedicated to Spinoza, for although Spinoza is the subject of the essays and although the history of his influence is traced in them, the theme that emerges uniformly in essay after essay is the history of the degradations of philosophy from Thomism. Spinoza is treated with sympathy and understanding, for he has as many virtues as he has points of similarity to St. Thomas, and they are fairly numerous. But the understanding is in the light of another philosophy than his own, and the force of his arguments is lost as well as the meaning of his doctrines. If it is true, as it doubtless is, that the history of philosophy can be read only by the standard of a given philosophy, Fr. Gemelli's associates have made a fair apologetic use of the history of Spinozism, for their thesis is stated clearly. The spiritual character of the volume they have produced is recognizable: it is a phase in the history of the war on Averroism that was begun in the works of St. Thomas.

R. McK.

Léonard de Vinci: La Grâce. RAYMOND BAYER. Paris: Félix Alcan. 1933. 302 pp. 30 fr.

This book, which follows the author's *l'Esthétique de la Grâce*, attempts to define the precise contribution of Leonardo da Vinci to the history of artistry. This contribution is a new kind of "grace"—we should prefer "elegance" perhaps in English—a grace which consists in his peculiar use of chiaroscuro. The lighting in his paintings is not thrown upon the objects as in Rembrandt, but is an atmosphere in which his objects are bathed. The reason for this is to be found in philosophic beliefs which found wide currency in the Florence of his time, that is, in that mixture of number superstition, pagan legend, and platonic commentary which is known as Renaissance platonism. That Leonardo knew his Neoplatonists, M. Bayer has amply shown; that he thought he was deriving his esthetic practice from their theories of the Sun—the metaphysical Sun, of course—is almost as well demonstrated; that anyone seeing his pictures could see any reasonable connection between Neoplatonism and their artistry is less probable. In any event M. Bayer has written a learned and what one reader at least has found to be an exciting book.

G. B.

The Concept of a Limited God: A Study in the Philosophy of Personalism. RANNIE BELLE BAKER. Washington, D. C.: Shenandoah Publishing House, Inc. 1934. xx + 234 pp. \$3.00.

This survey of the teachings of ten modern theists concerning the concept of a limited God is written throughout in a sectarian spirit, avowedly for the purpose of vindicating "true Personalism as presented by Lotze, Ward, Bowne, Tennant, Knudson, Wilson" as against the allegedly false and heretical Personalism of Rashdall and Brightman, together with their pluralistic precursors: McTaggart, Fechner, Renouvier, James, Mill, and Howison. The book exhibits but scarcely defends the familiar claim that "Personalism is not a separate system among the other systems of Philosophy. It is instead the assumption of them all."

H. A. L.

Kritik der sogenannten praktischen Erkenntnis. Zugleich Prolegomena zu einer Kritik der Rechtswissenschaft. ALF ROSS. Copenhagen: Levin & Munksgaard. Leipzig: Felix Meiner. 1933. 456 pp.

This is an important critique of ethical theory. The author's specific aim is to undermine the idea of "practical knowledge" or, in other words, to defend the thesis that morality is not a form of knowledge, but a qualitatively distinct type of experience, generating its own categories in terms of which ethics and the philosophy of right must be reconstructed. The general conclusion of this argument is stated on page 431:

The forms under which moral maxims are given are: sense, rationality, cognition, judgment. But these are all illusions. The real forms are: being, irrationality, expressions of experience, attitudes. . . . Psychologically the elementary process in practical consciousness of rationalizing the irrational, of objectifying the subjective, of logicizing experience, is probably of such a compelling necessity that none can escape it completely. The practical illusion of objectivity is probably a genuine idol of the tribe.

In working out this thesis, however, Dr. Ross undertakes a systematic analysis of the structure of morality and a thorough critique of the chief systems of ethics. The analysis has two parts, based on the two realms of morality: (1) Value experience and the ethics of value, based, according to Dr. Ross, on the disinterested impulses toward intrinsic good; and (2) the experience of duty and the ethics of duty, based on disinterested conduct. Though both realms of morality are based on disinterested impulses, the pursuit of value can be interpreted naturalistically as an instance of natural potentiality or teleology; but the experience of duty is radically non-natural and betrays the absolute disparity between nature and morality, or between actuality and value. In both realms, the fact of disin-

terestedness has been interpreted to imply the presence of universality, reason, law, and hence, knowledge; but in reality the disinterestedness is impulsive and subjective, a quality of moral will, not of practical reason.

The critique of value theories is divided into two sections, one on utilitarian theories from Bentham to behaviorism, the other on theories of natural tendency, potentiality, or teleology (*Potenzethik*), from Socrates to positivism. The critique of the ethics of duty begins with the reaction against Kant and culminates in a valuable exposition and criticism of the "psychological materialism" in Leonard Nelson's legal philosophy. Perhaps the most distinctive contribution is Dr. Ross's utilization of Axel Hägerström's work on Roman law and its implications for the general theory of rights and duties.

H. W. S.

Der Mythos vom Recht und seine empirischen Grundlagen. Eine Untersuchung über die erfahrungsmässigen Grundlagen der Rechtsvorstellung, zugleich ein Beitrag zur Begründung einer wissenschaftlichen Rechtslehre. THEODOR JAEHNER. München, Berlin, und Leipzig: J. Schweitzer (Arthur Sellier). 1933. viii + 211 pp. 10 R.M.

In this excellent analysis a judge outlines a philosophy of law based not on postulated rights, either subjective or objective, but on human activities, including the action of the judge. According to the author the myth of an original basic law is but a "reflex" product or fiction of the intervention of judges in the typical courses of human behavior and satisfactions (*Handlungsreihen* and *Genussreihen*). Whenever one of these normal series of conduct is broken by a *Störer*, a judge wielding superior power intervenes and attempts to restore the continuity. It is this *activity* of the judge among other human activities that generates law, not *vice versa*. Dr. Jaehner applies this thesis to private as well as to public law. The so-called principles of law turn out to be an attempt to make the activities of the judge systematic (*grundsätzlich*) in order that judgment may become a definite *type* or continuous series of behavior among the other types.

Unfortunately the author does not distinguish carefully between the series of satisfactions and the series of transactions. The latter (including contracts, promises, exchanges, etc.) obviously includes moral relations which imply some form of obligation or claim antecedent to the intervention of a judge. But apart from such moral obligation, all legal and juridical obligation can be derived from jurisdiction, and the science of law can be put on a strictly behavioristic basis. The qualities of value can then be derived from prac-

tical relations, in place of the usual "perverse theory" according to which values are regarded as *causes* of legal principles. "A theory of value is therefore nothing but a metaphor without an object, a hypostasis. What really exists is only a series of activities for the use (*Verwertung, Benutzung*) of goods" (p. 201). Both the concept of value and the concept of causality are mythical derivatives of the concept of purpose and purpose is derived directly from the social continuities of human behavior. H. W. S.

OTHER NEW BOOKS AND JOURNALS

PHILOSOPHICAL REVIEW. Vol. XLIII, 3. Identity and Implication: *R. W. Church*. The Realm of Universals: *V. G. McGill*. Probability and the Philosophic Foundations of Scientific Knowledge: *Benjamin Ginzburg*. The Relation of the Moral to the Aesthetic Standard in Plato: *Katharine Gilbert*. Discussion—Reflexive Relations: A Rejoinder: *DeWitt H. Parker*.

PHILOSOPHY OF SCIENCE. Volume I, Number 2. Meaning and Scientific Status of Causality: *Henry Margenau*. Concerning the Validity of Aristotelian Logic: *L. Kattsoff*. On the Method of Theoretical Physics: *Albert Einstein*. An Examination of the Quantum Theories: II. *William M. Malisoff*. Foundations of Mathematical Biophysics: *N. Rashevsky*. Time, Space and Gestalt: *Oliver L. Reiser*. The Mystery of Scientific Discovery: *A. C. Benjamin*. Discussion (Correspondence)—Meaning, Assertion, and Proposal: *John Dewey*. A Home for Logic: *Paul Weiss*.

Remy, Abbé.: Voyage dans les merveilles de l'espace. D'après les documents récents des grands observatoires. (Collection "Je Sème.") Paris: P. Téqui. 1934. 77 pp. 10 fr.

UNIVERSIDAD DE LA HABANA. Marzo-Abril de 1934. (A special number devoted to Enrique Jose Varona, with a bibliography.)

NOTES AND NEWS

TO THE EDITORS OF THE JOURNAL OF PHILOSOPHY:

In this JOURNAL for April 12, 1934 (Vol. XXXI, pp. 215 f.), my *Beginners' Logic* is taken to task for inconsistency in that it "equates universal propositions with hypothetical propositions, and then calmly assumes you can still go on inferring factual existence from the truth of the universal." Concerning this impeachment, which appears as an *obiter dictum* in a review of Cohen and Nagel's *Introduction to Logic and Scientific Method*, two remarks may be in order:

1. Until the concept of the null class has been presented, there is no inconsistency in passing from the truth of a universal proposition to that of the corresponding particular proposition. For words, phrases, and propositions mean *what they are understood as meaning*; and at this level of instruction, when we make an assertion about "All *S*" the reader will understand that *there are* members of the class in question. After the idea of the null class has been introduced, inferences depending upon the relation of subalternation presuppose the assumption that the class denoted by the subject term is not without members. This, by the way, is clearly stated on page 128 of *Beginners' Logic*.

2. The reviewer, however, seems to be under the impression that by equating universal categorical propositions with hypothetical propositions we have committed ourselves to the understanding that the subject class may be null. But this is far from obvious. To say that the proposition "All Philadelphians are Pennsylvanians" is equivalent to "If x is a Philadelphian then x is a Pennsylvanian" does not entail the admission that the class "Philadelphian" may be empty. Has the reviewer been misled by the associations of the adjective "hypothetical"? In ordinary usage this word suggests a doubt. But the proposition "If x is P it is Q " does not entail the possibility of P 's becoming null. This possibility may or may not be granted by the one who asserts the proposition. The *doubt* involved in the hypothetical form of statement is not whether P has members, but whether the object represented by x is a member of P .

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TO THE EDITORS OF THE JOURNAL OF PHILOSOPHY:

Professor Dotterer's text I consider excellent, as logic texts go, and I regret that my reference to it may have seemed too casual. Of course, I meant by "hypothetical proposition" what Keynes calls a "conditional." I should agree with Keynes that such a proposition can not always be interpreted to imply existence. But my objection has nothing to do with the meaning of the word "hypothetical." My objection is to wasting time by teaching elementary students what is *not so*, on the ground that at that "level of instruction" they will not catch on. It reminds me of the small boy who put in the Sunday School plate a lead nickel, on the ground that the little heathen would not know the difference. There are interpretations of "existential import," for example, which will save the whole of the "square of opposition," but not any interpretation which Professor Dotterer uses. Why then teach the

"square"? The reader may in a particular case "understand that there are members of the class in question," but if as a matter of fact there are not, the formal argument founded on such assumption will be "out of luck." We consider "existential import" in order that the fact of existence shall *not* come in, and truth and validity may be kept sharply separate. Perhaps accuracy is pedagogically impossible. It is unfortunate if this is the case, and in logic, of all subjects. But Bertrand Russell once told me he would not write an elementary logic book, because he did not feel he "wanted to tell so many lies."

HARRY T. COSTELLO.

TRINITY COLLEGE,
HARTFORD, CONN.

The Annual Meeting of the Mind Association and Joint Session with the Aristotelian Society will be held this year at University College, Cardiff, Wales, July 6, 7, and 8, 1934. The program is as follows:

FRIDAY, JULY 6.

8:00 P.M. Address by Professor J. W. Scott on "Humanity and History."

SATURDAY, JULY 7.

10:00 A.M. "The Element of Immediacy in Knowledge."

R. I. Aaron, G. Dawes Hicks, C. M. Campbell

2:00 P.M. "Liberty and Discipline in the Modern State."

C. E. M. Joad, John Strachey, and a third

8:00 P.M. "Communication and Verification."

L. Susan Stebbing, L. J. Russell, A. E. Heath

SUNDAY, JULY 8.

10:00 A.M. "Is Analysis a Useful Method in Philosophy?"

M. Black, J. Wisdom, M. C. Cornforth, G. E. Moore

8:00 P.M. "Artistic Form and the Unconscious."

J. M. Thorburn, A. H. Hannay, P. Leon

Particulars regarding accommodation and membership can be obtained from Professor J. W. Scott, University College, Cardiff, Wales.

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A PLEA FOR SUBSTANTIALISM IN PSYCHOLOGY

MR. LOVEJOY'S courteous acceptance of my invitation to discuss our difference of opinion regarding the nature of "transcendent reference," and his expression of the hope that discussion will be fruitful, give me courage to continue a debate which thus far has led to no result.¹ The question at issue between us is so important, it is so necessary that epistemological dualists should agree upon a theory of reference, and so indispensable to the progress and good name of philosophy that the problem of cognition, which for ages has been a stumbling-block to philosophers and a source of discord, should be completely and correctly solved, that no efforts we can make to reach an understanding should be spared.

Greatly to my surprise, the objections which I offered to Mr. Lovejoy's account of reference have not gone home to him. Less to my surprise and more to my regret, his criticisms of my theory do not come home to me. He thinks that I do not address myself to the right question; seeks to explain how I come to hold this theory by suspecting that I am not a consistent epistemological dualist; and supposes that my theory is not a theory of reference in general. I hope he will bear with me and not think me contentious if I say that he is mistaken in all three respects. He thinks that I do not answer the right question, because he has inadvertently stated the question in a way that implies his own answer to it. His statement is: "What is actually present to consciousness when the experience of 'referring to' an object as 'real' or 'not given' occurs?"² This assumes that the referring, at the moment when it occurs, is "present to consciousness";³ which I deny. I think that I stated the question more correctly and impartially when I said that the referring must be "in some sense conscious or mental";⁴ and one of

¹ My former article, "The Missing Link in Epistemology," appeared in this JOURNAL, Volume XXIX, (1932), pp. 673-687; it will be referred to hereafter as *ML*. Mr. Lovejoy's reply, "Dualism and the Paradox of Reference," referred to as *DP*, was in Volume XXX (1933), pp. 589-606.

² *DP*, p. 590.

³ Cf. his contribution to *Contemporary American Philosophy*, Vol. II, p. 97, where he says: "The 'intentional' or referential quality of a given bit of content present now in my cognitive experience is itself an item in the same present experience."

⁴ *ML*, p. 673.

my main objects in this rejoinder will be to show, as I failed to do with sufficient clearness before, that 'my theory does make it so. Reference, in my view, is not something we are conscious of at the moment, but is involved in the being conscious. If this is true, the question is not "analytical or descriptive" of what is present to consciousness,⁵ as Mr. Lovejoy assumes, and his view that it is so is a theory.

His theory, it will be recalled, is that we refer by *contrasting* the object with the datum and *conceiving* it as existing at a definite point in space or in time; while mine is that we refer by *mentally responding* in a way that places it unambiguously at that point.

We shall continue, I fear, to disagree about this matter unless we go back to the philosophical presuppositions on each side from which our two theories spring. Mr. Lovejoy has summarized my philosophy, in terms which are in large part correct: may I attempt to summarize his? He will correct me if I should misstate it. It will be found, I think, that I accept all his main positions, and that my philosophy consists simply in making additions to them—additions, it is true, which require slight modifications in the way in which those positions are to be conceived. Even if we should not in the end agree, it will be interesting to trace our disagreement to its source and understand clearly why we disagree.

I

THE PHILOSOPHICAL PRESUPPOSITIONS

In his philosophy Mr. Lovejoy is an epistemological realist and dualist, a psychophysical dualist, and a temporalist.

He regards data and other "contents" of consciousness as entities of a mental sort, and recognizes that they have being only by appearing: with this I agree. Sense-data are referred to real things which are physical, and which exist whether they appear or not; sense-data afford knowledge of the physical characters of these real things: again I agree. Human experience is in time—the past time known in memory *was* real, the future time thought of in expectation *will be* real, but we live only in *present* time: once more I agree. Data and other "contents" have a different nature from that of physical existents: I assent also to this. The existents known in perception and in memory are never identical with the data through which they are known (epistemological dualism): with this I fully and heartily agree. The mental entities above referred to, and the cerebral processes with which they are immediately connected, are distinct in their being and different in their nature (psychophysi-

⁵ DP, p. 590.

cal dualism): when "mental entities" are defined as Mr. Lovejoy defines them (viz., as data and other "contents," considered in their immediate being), I agree also with this.

Thus we appear to be both of us realists, epistemological and psychophysical dualists, and temporalists. How then do our two philosophies differ?

They differ because I add to the positions thus far mentioned, basing my additions on certain inferences from them and on certain facts.

The first inference is drawn from epistemological dualism. Since, in perception, only the sense-datum (with or without interpreting ideas) is immediately given, and the real thing is known only in terms of it, I infer that the nature of the real thing, as it exists apart from perception, is in perception *not* known. Its physical characters, the arrangement of its parts in space and their sequence in time, are known, and we are right in assuming that they are known to some extent correctly; but its intrinsic nature is not known, and perception leaves this nature problematic. What has just been said applies not only to the nature of external things, but also to the nature of the brain: the nature of the real thing which we perceive in the form of a brain is, from the point of view of perception, problematic.

I now proceed by reasoning from two facts. First, Mr. Lovejoy recognizes, as much as I do, that data and other "contents" of consciousness are closely connected with and somehow dependent on the brain. Secondly, he uses the phrase "presence to consciousness." I would point out that this phrase is tautological—since consciousness (awareness) and presence are the same thing; and that the correct phrase is, "presence to me"—to the self. What data and ideas in general are present to is always an entire organism or animal; just as it is only an entire organism or animal that can will. May it not be, then—this is the inference which I now draw—that that to which data appear, and which we perceive (not altogether incorrectly) in the form of a brain, is the self? By conceiving not merely data, but also the self to which they are given, as *distinct* from the brain as it really is, you unnecessarily double the real or existent at this point, and make the problem of the psychophysical relation insoluble; you can henceforth only say that consciousness "emerges," inexplicably. By identifying the self with the real brain, you take a long step towards solving this problem.

I can understand how a clear and critical mind, accustomed to see differences with great sharpness, should hesitate to take this step, and should look with scepticism on the notion that the brain

"generates" sense-data. But does it not obviously do so? Every time we awake from sleep, or a baby begins to be conscious, or when awareness first made its appearance in the race of animals, did not the brain (whose real nature may be the self) generate whatever data then became given? And if inanimate Nature could give birth, by what certainly appears to be a purely natural process, to seeing, thinking, and willing animals, is the hypothesis so absolutely inadmissible—since the real nature of what we perceive as matter is problematic—that she had in her *de quoi faire ce notable résultat*? Does philosophical sanity require that we should give up the hope of comprehending the world as one system? Far be it from me to suggest that inanimate things are really conscious, or are "mental" in the same sense in which data are mental: my thesis is only that they consist of a stuff out of which selves can be formed without miracle.

In one word, I regard "mental" entities as *derivative*, and think it the business partly of scientific psychology, partly of the philosophy of mind, to derive them.

This may seem an ambitious program. Yet Darwin succeeded, as some of us think, in explaining how new species can arise; Rutherford and his pupils are explaining how the more complex forms of matter arise out of the simpler, and are well on the way towards an explanation of their chemical properties; T. H. Morgan and his school are unravelling the mysteries of heredity; Gowland Hopkins and other organic chemists are explaining mechanically many vital processes: and—since consciousness does in fact come out of matter—it is not beyond the bounds of possibility, or a notion to be systematically frowned on, that its origin may yet prove explicable and "mental" entities be derived.

I have lately been reading a book by Professor Boring of Harvard, *The Physical Dimensions of Consciousness*, which gives color to this possibility, and should in my opinion be read by all philosophers. While we metaphysicians have been discussing our abstract questions, experimental psychologists were busily at work investigating point after point in the constitution of data, explaining why quality, intensity, extension, and duration appear as they do, and establishing the fundamental propositions about the self on which a scientific psychology must rest. If Mr. Lovejoy will look into Professor Boring's book, he will find, I think, that it bears out my evolutionary contentions in almost every point.⁶

⁶ Though Professor Boring states his conclusions in different terms from those which I use, his view of the mind is essentially the same as mine. I will enumerate the points of agreement. He maintains (1) an identity theory of the relation of mind and body (pp. 16, 238); (2) a relational theory of consciousness (pp. 222 ff.); (3) that the ultimate existents on which the relation

Now what I thus add—a substantial self, and its activity in generating data—Mr. Lovejoy, rightly or wrongly, omits. It seems to me that the only real difference between his philosophy and mine, and the root of our disagreement about reference, lies in this psychological realm. I propose, therefore, to ask what exactly he means by “consciousness.”

II

MEANINGS OF “CONSCIOUSNESS”

There is no subject on which it is more important for the philosopher to be perfectly clear. Well was James Ward advised to call this “a sand-heap of a term”; and Morris Cohen to protest against the vague use of the similar term “experience.” A little juggling with these crooked terms, and one can hold the most inept theories with an air of wisdom. I do not mean to suggest that Mr. Lovejoy juggles—he is too clear-headed and honest for that; but I think that he uses both terms incautiously, and I very much fear that, in the crucial question whether consciousness at the moment of its occurrence is or is not given, he comes down on the wrong side of the fence.

I will begin by drawing up a list of different things which it is possible to mean by “consciousness.”

1. One may mean the activity of a simple and indivisible Soul. Modern psychologists, in the effort to have done with non-empirical entities and study only observable facts, banished this notion and founded a “psychology without a Soul.”

2. They retained at first, and many philosophers still retain, the activity—that “impalpable inner flowing,” that “diaphanous” yet dimly perceptible awareness, distinct from data and contemplating them like an eye, or rather like the seeing of an eye, which James denied to be observable and explained otherwise. Thus arose a psychology without even (this sort of) “consciousness.” I will call this second meaning (supposedly) *observable awareness*.

of awareness depends are not given (p. 6); (4) that these existents are of the nature of sensation (p. 6); (5) that the meanings which they acquire are a matter of context, and that the context in question consists in response (p. 222); (6) that data are not real existents (p. 223); (7) that there is an elementary form of cognition, exemplified by the seeing, hearing, and touching of the lower animals, which is without memory or thought (p. 227). He does not, if I understand him rightly, use the kinesthetic sense of the response, as I do, to explain visual depth, or use the response itself to explain the unity of *Gestalten*, and mental organization in general; but his theory would, if I am not mistaken, be rendered more complete and many of his difficulties solved by doing so. In any case, his book gives to the view that data are psychologically generated the support of freshly ascertained facts. May I say what a satisfaction it is to find that psychologists have been doing such good work, and, as I am convinced, laying the foundations for the scientific philosophy of the future?

3. There remained only data of various kinds—sensible, imaginal, meanings *qua* given, relational—and processes, which are trains of data. But these have, as their common characteristic, a sort of *immediate being*, which may be distinguished from the particular characters given—from color, hardness, relations, meanings. This being may be compared to a menstruum in which pigments are dissolved, or to the incandescence which gives temporary luminous being to the filament of an electric lamp. The pure empiricist seizes upon this observable being as that which he means by “experience” or “consciousness.”

Note that, if one uses the term “consciousness” thus, while it is correct to speak of data as “present *in* consciousness,” it is incorrect to speak of them as “present *to* consciousness”—data, on this view, are not present to anything, they are simply present. The term “content” seems to have been invented for the express purpose of conveying this relation of being *in* consciousness so conceived.

4. One may mean by “consciousness,” as perhaps Whitehead does, the *subsequent* apprehension of data, by which we become aware of them as having been given—what James speaks of as the “effective” consciousness of them. This I will call *after-awareness*. If one uses the term “consciousness” in this sense, one must allow that, at the moment when the data were given, there was awareness of them—that is, they *were* given.

5. One may mean by the term something observable, which is apt to be taken for awareness, but which really is not awareness itself, but only a superficial consequence or manifestation of it. When I see an object, I may become aware that I see it. If I do, my visual sense-datum becomes part of a larger datum including my body or self *qua* datum, and between the two parts of this larger datum I feel that there is a relation, which may be described as *my having* the visual sense-datum. The relation is partly one of dependence; for, if I shut my eyes or turn my head, I lose the visual sense-datum. It is also a relation of activity; for I feel in my body or self muscular strains (due to the response of looking) and a heightening of tension which seems to have the effect of making the visual sense-datum clearly present.

But all these observed facts, the seen object, the body or self, and the relation between them—this is the point which I ask the reader to note, and verify in his own experience—are given only in the form of data. The real thing, the real body or self, and the real relation between them, are *not* given, and in the nature of the case can not be given. *Nothing is ever given except data*. This is simply a rigorous application of epistemological dualism to cognition of awareness and cognition of the self. The appropriate name for what has been observed is therefore *specious awareness*.

6. It follows that *real awareness*, awareness at the moment when it occurs, is not observable. And that is only good sense, for how can a person who sees see also his seeing? The very notion is thaumaturgic.

What does Mr. Lovejoy mean by "consciousness"? In which of these six possible senses does he use the word? It is a ticklish matter to seek to determine another man's view of anything so elusive, and I may easily go wrong.

He distinguishes sharply between consciousness and "content,"⁷ and even goes so far as to say that "there is nothing more unlike consciousness than a sense-datum."⁸ On the other hand, he repeatedly speaks of consciousness *and* "content" as together forming "experience," that is, as both of them given at the moment.⁹ He assumes that not merely the object, but also the cognitive experience of it, is at the moment cognized¹⁰—an assumption essential to his theory of reference. Finally, he says that "in cognition . . . consciousness becomes, in Royce's phrase, 'self-representative'"—and the context shows that he means, given to itself.¹¹

The conclusion to which I seem forced, after carefully considering these various passages, is that he means by "consciousness" the immediate being of the datum, but conceives this being as an awareness of the characters, and this awareness as aware of itself.

Such a view, if it is really Mr. Lovejoy's, involves a triple error. First, awareness is not aware of itself: for we are certainly often aware without being aware that we are aware. Secondly, the immediate being of the datum is not an *awareness* of the characters. Thirdly, though we are aware neither of our awareness nor of the self, yet, if we are aware of something, the self and its awareness must really be.

The identification of consciousness with anything given—with anything we are conscious of—is surely a grave error. How can three such unlike things as *what* I am aware of, *I* who am aware, and my *awareness*, be crowded together into the single empirical fact, the datum with its immediate being? Or take wanting: how

⁷ He speaks of the "curious neglect to distinguish between *-ings* and *-eds*. . . . Even 'consciousness' tended to be confused with content, that which we are conscious of" (*The Revolt against Dualism*, p. 6).

⁸ *Revolt*, p. 272.

⁹ *DP*, p. 591.

¹⁰ "Good and Bad Dualisms," this JOURNAL, Vol. XXIX (1932), p. 353.

¹¹ *Contemporary American Philosophy*, Vol. II, p. 98. In truth consciousness is "self-representative" only (1) in the sense that it may sometimes (but does not always) contain a *thought* of itself, or (2) in the sense that a later state of the self may have *after-awareness* of an earlier state of the self; but not (3) in the sense that to be aware is *eo ipso* to be aware of one's awareness—this is psychologically false.

can *what* I want, *I* who want it, and my mental *nisus* in wanting—three such dissimilar categories—be predicated of the one given fact? Mr. Lovejoy recognizes that data are inefficacious: how can I want my dinner efficaciously, if the self that wants is only a name for the being of the datum? If, on the contrary, there is a real self, quite distinct from all data, as my additions enable me to hold, the efficacy of its willing becomes intelligible. And, in that case, its awareness may be identical with the act by which it generates data.

In any case, it seems clear that Mr. Lovejoy is a phenomenalist in his psychology. He has only data with their immediate being, and processes, which are (so far as actually given) trains of data. These two, for him, are all that is in any sense "mental." And that is why he insists that data are "mental existents." He then stresses the difference of nature between "mental existents" and physical things (oblivious of the fact that the nature of these is problematic) to such a point that the derivation of the former from the latter becomes impossible. All he can say is that their relation is inexplicable, that consciousness is an "emergent."

Now data and physical things are indeed different in their nature, but the difference must not be conceived in such a way that generation of data by the brain or self becomes unthinkable. Since data are in fact generated, and since their being is the only nature with which we are immediately acquainted, this being is the source from which the nature of the self, if it is to be known at all, must be learned. What, then, is this nature?

It is the nature required in the self to make data present. The case is one for delicately accurate reasoning. It must be reasoning by the "physical method," which uses physical relations as a key to mental relations. When once it is recognized that the self, in cognition, is related to the real thing as the cerebral event is related to the physical object outside the body, this physical relation becomes a paradigm for interpreting and correctly analysing the relation between the self and the thing it knows. Now (1) cognition is, physically, a use of received impressions as signs of what is present externally. (2) The impression, as a physical process or existent, is quite distinct from the significance which it thus acquires—from its transitive function as presenting. It follows that sensation is distinct from awareness—that sensation, in itself, is unaware.

This notion of sensation as unaware, either of other things or of itself, as a state of mere feeling, will be "caviar to the general"; it will be quite indigestible and unintelligible, because we never have mentally to do with anything without being aware of it. And yet, when we are angry or hurt, it is not by being aware that we feel.

Any awareness of our state which we then have is "after-awareness." I have now indicated the nature of which we were in search.

The name I have been accustomed to employ for this nature is *sentience*—sentience and *impulsion*. It is the nature which the self has intrinsically, and apart from the transitive functions of knowing and willing, which it owes to organization. Unorganized things will therefore not have these functions, but they will have the nature which, when they become organized, renders the functions possible. Electrons, moving about in space, are not pure impulsion, but have also sentience in them, and consist (partly at least) of it. There is no other nature known to us that can be attributed to them. If they hadn't it, they could not, when organized, give birth to minds. Since physical science reveals truly the arrangement of the parts of things, sentience is spread out in space, flowing in time, and indefinitely divided.

Do not try too hard to imagine sentience. The sentience, for instance, of which the white-hot interior of a star is composed is, I confess it, the thinnest of abstractions. Not for that reason shall I allow my grip to be loosened on the truth that the being of data is the source from which the nature of things must be learned.¹²

¹² The statement of this philosophy most likely to be convincing, and that by which I should wish it to be judged, will be found in an article, "L'Etre et le Devenir: Thèses de Philosophie Naturelle," which is to appear in the *Recherches Philosophiques* for 1934.

Mr. Lovejoy's summary of it (*DP*, pp. 600-601) is in large part correct, but some of his statements need amplification or elucidation to make them quite so, and one or two of them are incorrect. In (1) and (4) he speaks of it as the view that body and mind are "two aspects" of the same thing—an "outer aspect" and an "inner aspect." The notion of a "double-aspect theory" arose at a time when the relation of mind and body was ill understood, and it was supposed that there were only *two* things whose relation required to be explained—cerebral events and "mental states." These were supposed to be related as are the convex and concave sides of a shield—a very vague notion. In reality there are *three* things: data, the self, and the brain. I am not sure that Mr. Lovejoy realizes that I insert an existent, the self, between the actual data given to this self and the possible data, given to other persons, which are the appearing of this self in the form of a brain. The self is not an "aspect" of anything; it is a real existent, in the same world with external things. This makes the self efficacious, in willing and attending. Cerebral events, *qua* data, are an "aspect" of the self only in the sense that they are the form in which it appears to an external observer. (5) It is not "the movements" (of the eye-muscles) that "intend," but intending is the selection by the self of a motor response so definite in its relations that it deals with *that* particular thing and no other, and therefore is directed upon or aimed at it. The self then means or refers to that thing; it is aware of something real. I will modify or add to Mr. Lovejoy's other statements so as to make them quite correct. (6) "There may be no real thing" of the sort perceived "at the place into which they [our states of sentience] are projected." "She . . . 'uses'" her states, and the sense-data generated by their use "constitute the

With sentience as a premiss, the power of the self to generate data becomes intelligible. They arise by our using our states of feeling transitively. That is, we are born with an irresistible tendency to behave as if what is inside us were outside; all the life and brilliance of sensation therefore appears as an external datum. This exteriorization of the internal has long been known to physiologists as "projection." Another change involved in the generating of data is "simplification"—that is, fusion of the fine parts of sentience (for sentience has as many fine parts as the cerebral process) into a relatively simple whole, which is the sole datum of attention. Our states can be used as signs only in large wholes, the parts disappearing because they can not be so used; the needs of living are the explanation of this. In generating data, the self "intuits" them: generation and intuition are different names for the same mental act.

The real difference between Mr. Lovejoy's philosophy and mine is that he is a phenomenalist or epistemological monist in his psychology; while I, in my psychology, am an epistemological dualist or substantialist. "This is the root of our disagreement about reference.

Substantialism in psychology unlocks some secrets which remain closed to phenomenism. Mr. Lovejoy is an ardent epistemological dualist; but can he explain *why* datum and object are two? It is because, while the sensible picture is drawn by the action of the object, the canvas on which it is drawn, or rather painted, is supplied by the subject, the self. He recognizes that data are inefficacious: can he explain why this is so, and how in willing the self can nevertheless be efficacious? It is because data are mere apparents, but the self is a real existent, in the same world with the external things on which it reacts. I can claim to be a more uncompromising epistemological dualist than he is; for I apply this doctrine all round the . . . extra-corporal" and extra-mental thing as "presented to her." (7) I wish Mr. Lovejoy would explain *why* there is "an enormous jump in the explanation here"; I doubt if he has understood it. (8) The innocent sense in which I meant the passage here quoted will be explained in the next section.

Professor Pratt, in this JOURNAL, Volume XXX (1933), p. 675, "finds it extremely difficult to see why" certain thinkers, among whom he mentions me, "should not be counted as speculative idealists." I can only speak for myself; but my philosophy is not idealism, because sentience possesses the cognitive function only when organized into animal bodies. I should describe it rather as a revised materialism—but materialism revised in a way that deprives it of its sting, of its grossness. To idealism it makes only the inevitable and just concession that the real is of such a nature that it can give birth to minds. It is a calumny on my view to suppose that I think that all reality is "mental" in the sense of aware, or in the sense of forming a single self. I find it extremely difficult to make others see that there may be such a thing as sentience not possessing the transitive function of awareness.

circle, not only to knowledge of the external world, but also to knowledge of the self.

The error of phenomenalism in psychology is exactly like its error in the theory of external perception: as, here, it identifies the existence of the object with the being of the sense-datum, so, there, it identifies the existence of the self with the being of data in general. It does not see that *what* I intuit, and *I* who intuit it, are distinct. The "consciousness" which arises from the amalgamation of these two becomes a mental existent, alien in its nature to the world out of which it issues naturally.¹³

How extraordinarily difficult it is to state correctly the relation of the datum to the object! Why should it be assumed that its relation to the self is any more easily statable—that you have only to take data, not *qua* revealing transcendent things, but in their immediate being, in order to have an accurate and final view of what consciousness is? There is extraordinary naïveness in the notion that consciousness is simple and ultimate, and that you need only look within you in order to perceive its nature. Consciousness is the most complex of things, the last product of evolution; electrical processes, hormones, blood-supply, oxygenation, instincts, past experience, present stimulation, reactive tendencies, sensations of the response, attention, whatever it is—all these are preconditions of those supposedly simple and ultimate data. Mr. Lovejoy has done yeoman's service in combatting the errors of idealism and of neo-realism; but his face has been turned too exclusively in this outward direction, and he has been relatively blind to what was passing meanwhile in himself. His idea of consciousness, if my account of it is correct, is insufficiently analytic. One needs to dwell on the nature of consciousness, to observe and ponder long, if one is to see that it is the sort of thing I have described, that the substantialist view of it fits the facts.

Phenomenalism in psychology is a hydra, the greatest present enemy of sound philosophy. It is essential to progress that this

¹³ I am in the unique position of having been once a strenuous advocate of the view which I here denounce—see my article, "Mr. James Ward and 'Modern' Psychology," *Psychological Review* for 1894, pp. 73 ff. Mr. Lovejoy will there find his own view clearly stated and argued for with all the *entrain* and conviction of a beginner. I opposed what I called the "light theory" of awareness to Ward's "eye theory"—the meaning of these expressions will be evident—and supposed I was making a great advance. I thought I was getting rid of non-empirical entities. Only after years of reflection did I see that all real existents are, in one sense, non-empirical entities—that is, objects, not data. Substantialism now enables me to conjoin an "eye theory" of awareness with a "light theory" of the nature of the self. Thus James Ward was right (though he did not state his position very happily) and I was wrong. I owe him this late *amende honorable*.

creature should be slain. The spear that slays him is the relation of awareness, rightly conceived. Experimental psychologists will have rendered a great service to philosophers if they show us how to wield effectually this spear. I do not abandon hope that Mr. Lovejoy will yet see his way to join the progressive, the scientific party.

III

THE THEORIES OF REFERENCE

These long preliminaries have been necessary to make clear the philosophical bases on which our two theories rest. I will now state my reasons for holding that, though the act of referring is not "actually present to consciousness," it is yet in a different sense "conscious or mental." And I will take, for this purpose, the example of seeing an object.

(1) You can not see without looking; but, if you look, you get sensations of the state of contraction of the optic muscles. These continue throughout the course of the seeing. The visual sense-datum is therefore generated out of a complex of visual and *kinesthetic* sensations. (2) The purpose of seeing is to take action (though it were only the continued looking). The sense-datum therefore accompanies a process in the entire sensori-motor tract from the eyes to the muscles. The critical event in this process is the selection of a motor part appropriate to the sensory part, and this selection is made in the centres. (3) Seeing is thus at once sensory and motor; it is not merely receptive, but just as truly active. (4) Looking unambiguously determines the real thing looked at as that which you see. But since the whole process described takes place in the self—whose nature is sentience and impulsion, organized into an animal body—this determination is a *mental* reference.

Thus, on my theory—and this is the point which I failed in my former article to make clear—it is not merely the kinesthetic sensations reporting the response that are mental, but the primary mental fact is the selection by the self of a movement with which to respond. This selection is the act of referring; the kinesthetic sensations only report the response after it has occurred. The selection is like the aiming of a gun; as William James says, "A feeling feels [he means knows] as a gun shoots." Mr. Lovejoy and I agree that reference is a placing of the thing meant at a definite point in space or in time. Now, turning the eyes towards it places it in a certain direction; converging them places it parallaxically at a certain distance; and accommodation places it by being neces-

sary to the sharpness of the image. These responses, however automatic, are yet an act of *mine*.¹⁴

Reference to an object is originally instinctive, being part of the innate equipment which goes with the possession of organs of sense; and it never ceases to be so. To show its instinctive nature, I chose the case of the cat who sees a mouse; not because I am particularly familiar with the mental processes of cats, but because it is bad method to reason from very complex cases when the simplest ones would show the relations of things much more clearly. Mr. Lovejoy recognizes that the cat's seeing is an instance of perception; but he will not admit that, in seeing, she refers her datum to the real mouse. He says: "There is, no doubt, a naïve kind of perception in which not the dimmest notion of possible existents beyond and apart from the immediate content is present to consciousness. That the perceptions of cats consist wholly of this kind of thing I should think quite possible."¹⁵ In other words, she is entirely wrapped up in her sense-datum, and unaware of the real mouse. This, surely, does grave injustice to the cat's seeing. No one who has watched her play with a mouse, or noticed how accurately she judges distances in jumping down from a height, can doubt that her humble perceptions acquaint her with the real. Even the chick just out of the shell sees and mentally responds to the real grain of corn at which he pecks so successfully. If reference were not instinctive and innate, no animal with sense-organs could use them from the start, as he must in order to live.¹⁶

Mr. Lovejoy evidently supposes that intuition of a datum can occur without reference to an object; but this is an illusion. I wish now to point out how vitally these two functions are connected; the connection is such that neither of them can occur without the other. They are connected by the fact that reference to an object and intuition of a datum depend on the same response. The response which aims seeing so that it hits a particular real thing is also the re-

¹⁴ Mr. Lovejoy misunderstands me when he says (*DP*, p. 601) that it is "the movements" (of the eye-muscles) that intend. What intends is the self when it ordains a movement, so chosen that it deals with *that* real thing and no other. The movement, when once it has been made, becomes "actually present to consciousness" in the form of the muscular or kinesthetic element in the datum; but this element is (until our attention is turned upon the self) *the given distance*, it becomes present only after the movement has been made, and is therefore not the referring itself.

¹⁵ *DP*, p. 603.

¹⁶ Mr. Lovejoy should apply to the cat what he says of cognition in us: "We can see beyond the fences . . . without jumping over the fences" (*DP*, p. 593); if we could not, "our experience would not introduce us to a world, but only to ourselves" (*ibid.*, p. 592). Thus, according to him, when the cat sees a mouse, her experience does not introduce her to a real mouse, but only to herself.

sponse which generates a datum showing that thing as at a certain distance. Hence *indication*, as I called reference in my former article, and intuition are inseparable; intuition of a datum is at the same time attribution of it to the real thing, or what I there called *depiction*. We never, in ordinary life, intuit a datum without attributing it to a real thing. The separation of these two, the isolation of intuition, is a fallacy which has done great mischief in epistemology.

I tried to express this in a passage which Mr. Lovejoy has misunderstood, and which, I admit, was open to misconstruction: "Even when the real thing appears falsely, as it often does, it is still the real thing, and not any 'appearance' or immediate object distinct from the real thing, which appears."¹⁷ This passage is, I think, the original source from which he drew his suspicion that I occasionally relapse from consistent epistemological dualism. What I meant to say was, that the datum in perception is not itself the object known, but is an appearing or manifestation of the real thing, and that essentially. I did not mean that datum and real thing *become* identical—how could this happen, if the real thing "appears falsely"? Misunderstanding here then led him to misinterpret two metaphors (he is quite right that metaphors in metaphysics are "usually reprehensible") by which I sought to express the mental hold which, by referring, the self obtains on the real thing. I said that the self "reaches" or "seizes" it. I did not mean by these words that the self *captures* the real thing and drags it inside consciousness, so that datum and object become one; I only meant that, by referring to the object, the self apprehends it as externally real. To refer to an object, surely, is in some sense to reach it in thought, to seize its existence mentally.¹⁸

As a preparation for discussing Mr. Lovejoy's theory of reference, I must now seek to make clear the difference which substantialism in psychology entails in the way in which the being of the datum is to be conceived. He, as a phenomenalist, conceives data as mental "existents," and thus ascribes to them a being independent of and not derivable from the existence of real things. But, if data are generated, and depend for their being on the act of generation—that

¹⁷ *Essays on the Natural Origin of the Mind*, p. 27. In the passage as he quotes it the last two words, which are very necessary to the sense, have been accidentally omitted.

¹⁸ I do not say, as he suggests, that "here there is no breach" (*DP*, p. 602), or hold that sense-data and real things ever *are* identical; but only that the naïve percipient (as distinguished from the reflective philosopher) *identifies* them, at least as to characters. Nor do I accept epistemological dualism "with reluctance" (*Ibid.*, p. 603), or "deviate at times" from it (p. 605), or transiently "relapse into naïve realism" (p. 605): these suspicions all rest on misunderstanding.

is, on appearing—they are essentially *apparents*, not to be separated from that act and conceived as having existence independently of it. What is meant by calling them *apparents* may perhaps best be brought home by the instance of the bluish objects which are seen when we wear blue spectacles: these have no real existence, either externally or in the self, and are therefore pure phantasms.¹⁹

If data are *apparents*, then all their characters are *apparent* characters, and do not themselves characterize the real. It is generally recognized that colors do not exist as such externally. But neither is intuited space identical with real space, or intuited time with real time. Both the time and the space of data are “specious.” They have indeed a relation to real space and time, in that they are protended by the state of the self and subtended by the real object; and a further relation, in that perceptive data reveal (more or less imperfectly) the space of the perceived object, and memorial data what happened at the time of the past event.

A visual sense-datum has an internal space; but this space is identical neither with the real space of the object—for objects appear smaller and smaller with distance—nor with the space of the state of the self to which the datum appears. The sense-datum has external relations to both these real spaces; it hangs, like a phantom, between the space of the subject and the space of the object. A visual sense-datum has also an internal time—for example, when it shows an object as moving or as continuing at rest. This internal time is not the real time during which the object moved or remained at rest, for that consisted of an indefinite number of successive parts, no two of which were real at once. The internal time is an extremely simplified vision of this real time, it is “specious.” The times of sense-data are “specious presents,” showing in very simplified form what occurred during the last fraction of a second.

Now memorial data (many of them at least) are perceptual data reproduced and assigned by transcendent reference to the past. Their internal time is therefore equally specious. As a perceptual datum is not, strictly speaking, in any real place, so a memorial datum is not, strictly speaking, in any real time. It has only, like the perceptual datum, an *external* relation to real time: namely, that

¹⁹ It was a piece of genuine insight on Locke's part to hit upon the word “phantasm” as expressing the nature of the datum. He was the first great epistemological dualist; though, unfortunately, he in the same breath conceived the datum as an immediate *object*, declared the real to be “something I know not what” (as if the datum did not describe it!), and so set epistemology going on the downward course which led to the idealism of Berkeley, the scepticism of Hume, and the agnosticism of Kant. Like so many of his successors down to our own day, Locke failed to see that it is the essential office of the datum to depict.

of depicting what happened in the real past time referred to. It hangs, phantom-like, between the past time of the event remembered and the present time of the state of the self.

What has been said about the speciousness of data and their characters applies to all "contents" of consciousness: whether they be imaginal data—for these are residues left behind by the sensible ones; or data so vague that we have not even images of them—for of these the same is true; or conceived relations—for these are connections once given between sensible data, and only from these deriving their authority. Data are thus seen to be an illusory addition, without substance and without efficacy, to the entire closed system of the real world.

Now I come to Mr. Lovejoy's theory of reference. The object of these long preliminaries has been to enable me to re-state my objections to it in such a way that their force will be felt. His theory is that we refer to an object, not by mentally responding as if there were one at a definite point in real space or real time, but by *contrasting* the object with the datum and *conceiving* it as existing at that point.

I do not wish to exaggerate the difference between this theory and mine, but should like to go with him as far as I can. We agree that the object is referred to by our placing it; but we differ as to the means by which this is done. A statement in his reply seems to indicate a further point of agreement. I did, as he suggests, suppose him to mean that "when I remember I am attending to *two* objects, have before me two sets of imaginal data"²⁰—or, at least, two things, the object and the datum, *and their distinctness*. I think I was justified in supposing this by his statements that "to remember is to be aware of a contrast between the image presented and the event recalled,"²¹ and that there is here "an apprehended temporal distinction";²² further, by his speaking of the conceptual schema as "an image of the Whole."²³ How indeed could the relation of past to present be "apprehended" unless there were two things, two terms, before the mind? I am glad to find that we agree that there is but one thing attended to (of course, for both of us, there is a datum given and an object referred to); this brings our theories somewhat nearer together. But, if so, is it true that the distinction or contrast is apprehended, and not rather that the object is apprehended in a way that makes it in fact contrasted or distinct? It seems to me that only the latter view gives a true account of the simplest instances of memory and perception.

²⁰ *DP*, p. 596.

²¹ *Revolt*, p. 305.

²² *DP*, p. 596.

²³ *Revolt*, p. 321.

In memory the object is referred to as distant in time, and in perception it is referred to as distant in space. There is an analogy between these two sorts of distance, which may help us to analyse the experiences correctly. Now, surely, I may perceive an object as distant in space without being explicitly aware of its distance as a relation to my body, though such a relation is, of course, implied: may I not, by the same analogy, be aware of a past event as distant in time without being explicitly aware of its temporal distance as a relation between past and present? It seems to me that, in both cases, there is *no* awareness of a relation, but only the implication of one. And Mr. Lovejoy seems to me to be admitting this, and excluding his own view that we refer by contrasting, when he says that there is but one thing attended to.²⁴

In discussing the application of his theory to perception I must plead guilty of an error. I misrepresented his theory by attributing to him the view that "the place of the sense-datum is *here*, where my body is" (I did so hypothetically, asking to be corrected if my account of his theory was wrong);²⁵ and for this I apologize. But may I explain why I did so? Since he regards the memorial datum as an existent in real time, I thought that, by the same analogy, he should regard the sense-datum as an existent in real space, and its place as *here*. I was trying to make his account of perception and his account of memory quite consistent with each other. If, on the contrary, the sense-datum is not in any real place, must he not, in order to make them consistent, take the analogy the other way about, and recognize that the memorial datum is not in real time? I know it is commonly held that "states of consciousness" are in time but not in space; but this is a deduction from phenomenalism in psychology, and not a result of very careful thinking.

I will now re-state my objections to Mr. Lovejoy's theory. It has a point of departure, the datum conceived as a present existent, and a means of referring, the conceptual schema—or, as he puts it, "a schema of relations of mutual existential externality."²⁶

1. In the case of memory, it is an essential premiss of the theory

²⁴ The antithesis between the *now* and the *then* is of the essence of memory, true: but not the consciousness of this antithesis. "A conceived or imputed by-goneness" (*DP*, p. 597): imputed, yes, but conceived, no. Yet the latter is Mr. Lovejoy's view: "It is only when the distinction is in some degree present to consciousness that referential experience occurs" (*ibid.*, p. 600). "Merely to perceive is not to be aware of a contrast between datum and cognoscendum. But merely to remember is to be aware of a contrast between the image presented and the event recalled" (*Revolt*, p. 305).

²⁵ *ML*, p. 680.

²⁶ "Good and Bad Dualisms, p. 353.

that the datum should be an existent in present time.²⁷ But this premiss is erroneous. Nothing which is "actually present to consciousness" is in real time. What is in real time is only the state of the self to which the datum is given. Thus Mr. Lovejoy loses his solid point of departure, his *ποῦ στῶ*.

The datum, both as to immediate being and as to characters, is not real—it is only an apparent. It is not in present time, because it has no time except the internal time which it shows, and this time is past. It is the past moment or duration appearing. It appears now, but its appearing now does not appear. Further, reference precedes and is necessary to the formation of a memory-image. You can not have such an image at all unless you begin by referring to the past; and, if you do so, the only time of the datum is the past time which it shows.

Mr. Lovejoy can suppose the datum to be an existent in present time because he identifies consciousness with the being of data, and, since this being is given with the datum, thinks that we are conscious not only of the datum, but also of our consciousness of it. The datum thus becomes an existent, independently of its appearing to a self. The issue between us reduces to that between phenomenalism and substantialism in psychology.

2. His means of referring is the conceived relation of past to present. But conceived relations are residues of relations once actually experienced; and when they were experienced—e.g., the spatial relation between two objects, or the sequence of two events—it can not have been by our using a conceptual schema derived from the past, for the spatial relation was *seen* in the form of a relation between parts of the visual datum, the sequence was *felt* in the form of a relation between an imaginal and a sensible datum. Concepts are derived from percepts—not *vice versa*—and at the beginning of our experience we had no concepts to use, and yet saw spatial relations and felt sequences.

3. The theory attempts to refer data by means which are only data themselves.

An epistemological dualist is obliged to make an absolute distinction between data and objects. No datum ever is the object referred to. This is true of sense-data, of imaginal or conceptual data, and of conceived relations between data. It is true of the conceived relational datum "the contrast between past and present," or of

²⁷ *Contemporary American Philosophy*, Vol. II, p. 98: "The memory-image exists as a present bit of reality now and at no other time." In *DP*, p. 595, there is a slight misquotation from my former article which needs rectifying: "the present antithesis" should read "the presented antithesis"—the former would have been an admission on my part that the datum is in real present time.

the conceived relational datum "the reference of a presented datum to the past." These are merely complex data, which require to be referred to their objects—the *real* contrast, the *real* reference—and which can not themselves do the referring. Each of these complex data contains the datum "the past" as one constituent. This datum is not the past itself; it can have to do with the *real* past only by being referred. Reference, clearly, must be an act quite distinct from any datum or any combination of data, it must be other than anything "actually present to consciousness."

What makes Mr. Lovejoy's theory plausible to him is the fact that we can become reflectively conscious of reference after it has occurred, and have the complex datum "the contrast between past and present" or "the reference of a datum to an object" given to us. He confuses this reflective datum with the automatic referring which occurs in naïve memory or naïve perception. But the reflective datum is only an *idea* of referring, it is not referring itself. The photograph of a camera pointed at an object is not that camera's pointing; and you can not get the photograph without another camera, the pointing of which is *not* photographed.

Referring to the real—such is my conclusion—is not an activity whose nature lies in being present to consciousness, but is part of the transitive function by which the self enters into relations with other things. It is like loving or hating or desiring, which are also transitive functions. As only an entire animal can love or hate or desire, so only an entire animal can mean or intend. Those are different sorts of mental *nisus*; meaning or intending is a sort of mental act, by which the self indicates unambiguously the particular real thing with which it has to do. We can love or hate or desire without necessarily being aware that we do so; and, in the same way, we can refer to an object without being aware that we refer to it, or having this fact given to us as a datum. Cats and chicks refer, but do not know that they refer.

Like loving, hating, desiring, the power of referring to the real is one with which every animal is born. It is originally automatic, and never ceases to be so, even in the most subtle human reflection. A man's last thought is always unreflected on, and its referring automatic.

How so clear a thinker as Mr. Lovejoy can fail to recognize that concepts are derived from percepts, that the child, like the young animal, originally sees, hears, and touches real things without interpreting conceptually, and has to gather slowly the materials for forming a conceptual schema—how he can fail to recognize this, and miss my point about *existence* (as distinguished from the idea of existence) not being a possible datum, I find it hard to understand.

And yet perhaps I do understand. His view that we refer by conceiving is a typical instance of the post-Kantian idealistic definition of "knowledge." When sensations were thought to be impressions *not* revealing real things independent of them, knowledge had to be re-defined as the use of ideas for apperceiving sense-data. There was no such thing as *connaître*; there was only *savoir*. Now *savoir* is, in truth, the employment of knowledge which has been previously acquired. If we had not learned by vision, hearing, touch, and awareness of our own states the existence and relations of things, we should have no knowledge to employ. There are really these two different kinds of knowing; but knowing by sensible experience is the original kind, and the source from which all that is known by conceptual thinking is derived.

In closing this plea for substantialism in psychology, I wish to point out two merits of the theory, contributions it can make towards a solution of the problem of cognition, which are denied to phenomenalism.

1. The view that data are generated and real things referred to by the same sensori-motor process vitally connects the two functions of intuition and indication, in such a way that neither can occur without the other. Phenomenalism, on the contrary, isolates intuition from indication and supposes that it can occur by itself. The phenomenalist thus remains immersed in his "mental existents" and craving to transcend them; that he should be able to get out and know the real seems to him a "paradox." If, however, real things are indicated by the same mental act by which data become given, he was out from the start, and it was a fallacy to imagine that he was ever merely in. Thus substantialism in psychology makes possible a refutation of scepticism.

2. The view that consciousness, with its indication of real things and depiction of them in the form of data, arises by a natural process out of the real world, and that this world, therefore, must contain all that is necessary for the explanation of its origin, both as regards characters given and as regards givenness, involves the consequence that the nature of the real is *not* unknowable. It is a fallacy to suppose that we know data, but do not know the real (though true that data in some respects over-simplify or even distort the real); and adventurous to suppose that there are parts of the real which are inevitably hidden from knowledge. Thus substantialism in psychology makes possible a refutation of agnosticism.

Philosophers whose trust is in science should join in a vigorous effort to exterminate these fallacies, and drag epistemology out of the slough in which Berkeley, Hume, and Kant have left it.

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C. A. STRONG.

Nature and Life. ALFRED NORTH WHITEHEAD. Chicago. University of Chicago Press. 1934. 46 pages. \$50.

These two lectures constitute the clearest and most persuasive introduction to the "philosophy of organism" that Professor Whitehead has yet given us. The aim is not to present this cosmology itself, but rather first to indicate the basic deficiencies in the "Hume-Newton modes of thought" which still stand in the way of its acceptance, and second to emphasize "those aspects of the universe as experienced and of our modes of experiencing, which jointly lead to the more penetrating ways of understanding" (p. 10).

The status of life in Nature is the key problem here. So long as "Nature" is limited to the abstractions of traditional physics and "experience" to the deliverances of sense perception no adequate solution is possible. In his first lecture, therefore, Professor Whitehead criticizes "the concept of nature" in the terms which his earlier works have made familiar. We must not treat provisional abstractions as ultimate. We can not acquiesce in a "nature" which is "a self-sufficient, meaningless complex of facts (p. 6), especially since physics itself has abandoned this notion in favor of "process conceived as a complex of activity with internal relations between its various factors" (p. 20). And we must seek, beyond the complacent irrationalism of current positivism, a *reasonable connection* as a basis for observed correlations. Such wider understanding involves an appeal not only to the systematic relatedness and creative advance of nature, but also to "life" and purpose. "All ultimate reasons are in terms of aim at value" (p. 9).

The second lecture outlines the notion of life in terms of which Professor Whitehead proposes to correct the abstractions of physical science. "Life is the enjoyment of emotion, derived from the past and aimed at the future" (p. 44). Its characteristic features are self-enjoyment, creative activity, and subjective aim. Do we observe in nature anything that corresponds to this description? The answer is in the affirmative, but only when "observation," like "nature," has been given a broader meaning. Sense perception will not suffice. But we are directly conscious of purpose as directing our own activities (p. 32), we experience the unity of mind and body in the derivation of emotion from bodily states (p. 36), and we have a "fundamental basic persuasion" of the derivation of present mental states from those immediately preceding (p. 37). These experiences provide basic facts on which epistemology must build, and when they are combined with an understandable account of recent science they suggest at once a fruitful philosophical hy-

pothesis—that “the energetic activity considered in physics is the emotional intensity entertained in life” (p. 46).

Even those who entertain grave doubts as to the ultimate validity of this hypothesis will appreciate the scope and insight of this masterly presentation.

A. E. M.

Determinism, Indeterminism, and Libertarianism. C. D. BROAD.
Cambridge: At the University Press. New York: The Macmillan Company. 1934. 48 pp.

In this Inaugural Lecture the Knightsbridge Professor of Moral Philosophy in the University of Cambridge analyzes the relations between causality and obligability. He proves that the concept of voluntary determination or, as he terms it, secondary substitutability, makes no logical difference in the argument for indeterminism. The real issue is whether the cause of a particular “putting forth of effort” is itself another event or whether the cause is a substance, self, Law, Reason, or other form of non-occurrent cause. The belief in such non-occurrent causation he terms libertarianism and proves it to be *prima facie* untenable. The only other basis for the belief in categorical obligability is indeterminism, “the possibility and intelligibility of accidents, or of occurrences which are “causal progenitors” and not merely the products of their ancestors; but few believers in categorical obligability are willing to rest their case on such “accidents.” Consequently Professor Broad concludes that “it is highly probable that the notion of categorical obligability is a delusive notion.” Obligability, to have genuine application, must be “conditional obligability” and implies only conditional substitutability.

This formal analysis of propositions involving “could” and “ought” is very clarifying and proves quite conclusively what might have been anticipated *a priori*, namely, that only a negative conclusion is possible from the attempt to derive obligation from freedom. The fact that such analysis is not intended to throw light on the practical problems of scientific and moral responsibility is clear from the following incidental illustration: “We say: ‘The stone broke the window’ . . . but it is quite evident that all such phrases are elliptical . . . [and] would be more fully expressed by the sentence: ‘The coming in contact of the moving stone with the window at a certain moment caused a process of disintegration to be begun in the window at that moment.’” It is obvious that anyone who has a moral or scientific interest in the cause of the broken window would never think of holding the “contact” responsible; he would look to the stone “or to him who threw it, ellipsis or no

ellipsis. It seems probable, therefore, that whatever may be true of *propositions* of obligation, *judgments* of obligation rest on other grounds than on retrospective obligability. H. W. S.

Technics and Civilization. LEWIS MUMFORD. New York: Harcourt, Brace & Company. 1934. x + 495 pp. \$4.50.

For every thousand persons who speak glibly of this "machine age" and its effects upon human existence, there is hardly one who knows more than a handful of facts about machines and their history. Mr. Mumford has supplied a book much needed in English by writing an enlightening history of the machine, its use and its misuse, during the last thousand years. From most diverse sources, listed in an annotated bibliography, he has gathered data which should explode dozens of popular myths about the industrial revolution: it was not sudden; it was far from wholly British; it was an "upthrust into barbarism" almost universally hailed as a "humane and beneficial advance."

Mr. Mumford, a disciple of Patrick Geddes, in turn much influenced by Comte, adds a third stage, the eotechnic, prior to the two (paleotechnic and neotechnic) discerned by Geddes in man's utilization of machines. His chapters on the centuries covered by this phase will come as a revelation to those who imagine that all machines were somehow born from Watt's tea-kettle. From the tenth century to about 1750, he argues, culture and technics were "relatively in harmony . . . both predominantly in the service of life." Then came the new Dark Age of the paleotechnic era, when "mankind behaved like a drunken heir on a spree." The new riches of coal and iron were squandered upon military and commercial wars, while into the sky poured "atmospheric sewage" from countless factories, and profit, quantity, and speed became regarded as ideal values. From such horrors a Ruskin might well turn back longingly toward the eotechnic age; but with the coming of easily transmitted electric power, it became possible for man to go forward to neotechnics, the use of machines for life-enhancement by humane individuals. The goods life, instead of the good life, however, is still with us; we still use "neotechnic means for paleotechnic ends." But not for long. Mr. Mumford's last two chapters contain a sketch of his present program for the subjugation of machinery to ideal ends. Many will challenge his conclusions; and a detailed review could pick quarrels with some of his more hasty interpretations. But none can dispute the fact that he has written an extraordinarily wide-ranging, sensitive, and provocative book about a subject upon which philosophers have so far shed but little light. Not many current volumes, despite the dreary title, are at once as

informative and stimulating. A long-needed "List of Inventions" by centuries, and some sixty excellent illustrations, add to its value.

H. A. L.

Johann Eduard Erdmann. HERMANN GLOCKNER. Stuttgart: Fr. Frommanns (H. Kurtz). 1932. Pp. xx + 200.

The author of this monograph, which appears as number XXX in Frommanns Klassiker der Philosophie series, has claims to be the most faithful and erudite living historian of German Hegelianism. One senses that he feels a spiritual kinship with Johann Eduard Erdmann, who probably represents for all time the most complete combination of erudition in the history of philosophy with fidelity to the ideas of Hegel. The book is a small biography, presenting not only the development of Erdmann's thought, but also a picture of his personality in his beautiful relation to his wife, in his pride as a virtuoso lecturer, and in his enjoyment, as an accomplished man of the world, of scientific and social contacts which extended beyond Germany and especially to Paris.

Erdmann's understanding of Hegel must be called reproductive rather than fundamentally creative. But, as Glockner shows, he transcended the Hegelian school's understanding of the master in two respects. He tried in his historical works to present the Hegelian philosophy as the culmination of the development of western philosophy in a fuller and more detailed sense than anyone else had done. In his works on psychology he undertook to keep the Hegelian doctrine of mind and nature in rapport with current scientific developments, particularly in biology and physiology. One wishes that the monograph were more explicit regarding his works on psychology.

In my experience I have found that only Erdmann's general *Grundriss der Geschichte der Philosophie*, first published in 1865-1866 and translated into English in 1890, is well known to American scholars. In this work Erdmann enlarged on Hegel's treatment of medieval philosophy and added a section on German philosophy from Hegel through Lotze. But he regarded the book as an "Outline" for his students. It is not his *magnum opus* in the history of philosophy. The latter is his *Versuch einer wissenschaftlichen Darstellung der Geschichte der neuern Philosophie*, 1834-1853. This work has not been translated into English. It undertakes to trace comprehensively the dialectic of modern philosophy from Descartes through Hegel. Both as a work of factual research and of sustained philosophical interpretation it is a unique achievement. But there is no denying that the limitations of its premises are also strikingly manifest. Even Glockner has to admit, in speaking of Erdmann's

treatment of Schopenhauer and the later Schelling, that: "Neither Schopenhauer nor the later Schelling in his totality found a place in the *Versuch*. Should one regret it? Either of these personalities would have burst the frame of the work, had his deepest nature been brought into account. Like the great philosopher, so also the great historian of philosophy requires a certain onesidedness" (p. 152). Strange defense of a Hegelian!

H. L. F.

Der theoretische Weg Bradley's: die Hauptgedanken der Wahrheits- und Wirklichkeitslehre des englischen Philosophen Francis Herbert Bradley (1846-1924). ADRIEN CHAPPUIS. Paris: Firmin-Didot & Cie. 1934. 138 pp.

This is a systematic, careful, and clear exposition of most of the more metaphysical parts of Bradley's philosophy. *Appearance and Reality* is the only work by Bradley translated into German. But *The Principles of Logic* and *Essays on Truth and Reality* are likewise extensively used in this study.

In the preface the author states as his view that Bradley's fundamental principles remained unchanged after the publication of *Appearance and Reality*, the later works merely carrying out more explicitly and profoundly the positions already stated. Yet he adds that Bradley gave more attention in his later works to the standpoint of the finite centers of experience and consequently recognized more fully the latent scepticism of his position.

S. P. L.

Philosophy of Society. Papers read at the Ninth Annual Meeting of the American Catholic Philosophical Association, December 28 and 29, 1933, Pittsburgh, Pennsylvania. CHARLES A. HART, editor. Philadelphia: The Dolphin Press. 1934. xii + 203 pp.

This volume is the product of a symposium. The most critical and informative paper is undoubtedly that of Paul Martin on "The Philosophy of Internationalism" which contains much of interest on the theory of nationalism as well. The three papers on capitalism, communism, and fascism are slight; they reveal a sincere desire by Catholics to meet fascism and communism half-way, and President Roosevelt practically the whole way, while they climb rather noisily onto the anti-capitalism bandwagon. Clare Riedl gives a useful elementary exposition of St. Thomas' social theory, with copious and judicious references. Jules A. Baisnée interprets the scholastic theory of value and Leo R. Ward attempts a critique of current value-theories (especially Perry's), accusing most of them of verbalism (though the author admits incidentally that the Dewey-

Tugwell theory has the scholastic merit of beginning with the act of valuing instead of with the concept (of value). Dean William T. Dillon writes a genial criticism of tendencies in the common law, and President J. J. Callahan philosophises on the stabilizing value of history. There are three papers on the family, education, and religion. An able and useful contribution is Raymond A. McGowan's summary of the papal program for social reconstruction.

H. W. S.

Lectures on the Meaning of God in Modern Life. (Scripps College Papers, Number Five). Claremont, California: Scripps College. 1933. 71 pp.

A collection of four lectures by different authors, delivered at Scripps College on Sunday evenings in March, 1933. Lecture I: The Meaning of God for an Average Man, by John Whittier Darr, Professor of Religion, Scripps College. Lecture II: The Idea of God in Modern Politics, by Russell McCulloch Story, Professor of Political Science, Pomona College (an original and significant contribution to political science). Lecture III: The Ethical Significance of the God Experience, by Theodore Gerald Soares, Professor of Ethics, California Institute of Technology. Lecture IV: God and Philosophical Thinking, by Hartley Burr Alexander, Professor of Philosophy, Scripps College (a stimulating argument for the thesis that "God is primarily a greatness of human experience, not an article of belief").

R. S.

OTHER NEW BOOKS AND JOURNALS

REVUE PHILOSOPHIQUE. 59^e Année, Nos. 5 et 6. Les mathématiques et le divers: *E. Meyerson*. Notes sur *La Repetition* de Kierkegaard: *R. Bernaloff*. La vie esthétique et le problème de la connaissance: *C. Schuwer*. La psychologie de l'acteur: *P. Jacobson*. Μοῦσα, étude sur l'esthétique de Platon (suite): *H. Perls*. Sémiologie du sommeil: *A. Tournay*.

GIORNALE CRITICO DELLA FILOSOFIA ITALIANA. Anno XV, Fasc. I-II. Poesia e genio: *G. Gentile*. Alla riconquista dell' Aristotele perduto: *E. Bignone*. L'"Istruzione contro i Gesuiti" e il Campanella: *R. De Mattei*. Il deismo inglese del Settecento: *C. Motzo Dentice di Accadia*. L'idealismo concreto di P. Carabellese. Parte II^a: Le Opere Maggiori: *I. Baggio*. Lo Stato, l'individuo e l'attualismo: *M. Federico Sciacca*.

SOPHIA. Anno II. N. 1-2. Parmenide: *Emilio Bodrero*. Ricerche e studi sulla filosofia post-kantiana K. Chr. F. Krause: *Antonio*

Banfi. Varie forme dell'argomento ontologico: *Gaetano Capone-Braga*. Il tema agostiniano e il tema tomistico nella speculazione filosofica: *Generoso Gallucci*. La filosofia di Bernardino Varisco: *Giulio Alliney*. Arturo Schopenhauer e la mistica: *Giuseppe Faggin*. Samuel Clarke e il razionalismo inglese del secolo XVIII: *Eugenio Garin*. La religiosità di Goethe: *Remo Fedi*. Per una nuova interpretazione della Storia dell'Hegelianesimo in Italia: *Siro Contri*. Sulla storia delle dottrine politiche della Grecia antica: *Arturo Beccari*. Filosofia e romanticismo: *Michele Losacco*. Storicismo attualista (seconda puntata): *Carmelo Ottaviano*.

LES ETUDES PHILOSOPHIQUES. Septième Année, Nos. 3-4. Commemoration du centenaire de Goethe.—Goethe et la religion: *H. Meyer*. Position du mystère ontologique et ses approches concrètes: *Gabriel Marcel*. La décadence de l'ordre juridique latin: *Gaston Morin*. Spinoza homme libre: *J. Segond*. L'art comme méthode philosophique: *Etienne Souriau*. Défense et illustration de la machine: *Elie Faure*. Lettres de MM. Maurice Blondel, Emile Brehier, Dr. Jasink, Arrigo Levasti, Th. Néal, Jean Rimaud.

REVUE DES SCIENCES PHILOSOPHIQUES ET THÉOLOGIQUES. Tome XXIII, No. 1. Le temps et l'âme selon Aristote: *A. J. Festugière*. Le défaut d'éloquence et le style oral de Saint Paul: *E. B. Allo*. Thomisme et droit social: *R. G. Renard*. *Potestas procurandi et dispensandi*: *C. Spicq*. Résurrection et identité corporelle: *E. Hugueny*.

Jansen, Bernard: *La Philosophie Religieuse de Kant*. (Bibliothèque d'Histoire de la Philosophie.) Traduit et adapté de l'Allemand par Pierre Chaillet. Paris: J. Vrin. 1934. 179 pp. 25 fr. ("In the German edition the author added a theoretical and constructive part to the historical part of his book. . . . He attempted there to show how scholasticism's principles of a realistic and synthetic metaphysics offer a satisfactory reply to the epistemological problems propounded by Kant. This new French edition and adaptation deliberately omits this section as too summary to meet all the difficulties adequately. . . . The first part itself has been changed. . . . In order to reply carefully to the many well-founded objections by critics of the first German edition, the historical section has been expanded at certain important points, such as on belief, symbolism, and the relation between historic faith and rational faith. . . . This edition has been freed of useless digressions in the German work. . . . References to French works have been added to the German sources" [pp. 10-11].)

D'Eschevannes, C.: *Pasteur. Sa vie, sa foi, son œuvre*. Documents inédits. (Collection, "Je Sème.") Paris: P. Téqui. 1934. xii + 236 pp. 10 fr.

Lakhovsky, Georges: *Le Racisme et l'Orchestre Universel*. Paris: Félix Alcan. 1934. 153 pp. 15 fr.

Mursell, James L.: *Human Values in Music Education*. New York: Silver, Burdett, & Co. 1934. 388 pp. \$2.40.

Berraz, Manuel Augusto: *Lo Bello y lo Bueno. A la Luz, Principalmente, de los Conceptos Fundamentales de la Filosofía Tomista*. (Instituto de Filosofía, II.) Buenos Aires: Universidad de Buenos Aires Facultad de Filosofía y Letras. 1933. 47 pp.

Colle, Gaston: *Le Divin Platon*. (Publications de l'Ecole des Sciences Philosophiques et Religieuses, 2^e Série, No. 2.) Bruxelles: École des Sciences Philosophique et Religieuses. 1934. 19 pp.

Duplessy, Chanoine E.: *Cours de Religion en forme de petits prêches. Troisième Série. Les Sacrements à recevoir. (52 Lectures.)* Paris: Pierre Téqui. 1932. Quatrième édition. viii, pp. 323-485. 6 fr.

NOTES AND NEWS

The Publication Committee of the American Philosophical Association has recently been enlarged. It is now made up of A. O. Lovejoy, *Chairman*, E. A. Burtt, W. A. Hammond, D. H. Parker, and S. P. Lamprecht. The committee has also taken on an added function in connection with the American Council of Learned Societies. It will review and report to the Council on requests for publication assistance and rotograph service in the field of philosophy. Application for assistance in these matters will hereafter be made to or referred to the Publication Committee of the Association.

For the Board of Officers of the American Philosophical Association,

H. G. TOWNSEND, *Sec'y*.

The 1934 meeting of the Eastern Division of the American Philosophical Association will be held at the Washington Square branch of New York University, New York City, Thursday to Saturday, December 27 to 29. The forenoon session on Friday, December 28, will be devoted to a symposium by invited speakers on a subject connected with Social Philosophy.

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Volume XXXI. No. 6. March 15, 1934.

Verifiability, Truth, and Verification. ERNEST NAGEL.
Neo-Classicism, Platonism, and Romanticism. PAUL GOODMAN.
Book Reviews. Journals and New Books. Notes and News.

Volume XXXI. No. 7. March 29, 1934.

The Objectivity of Mind. CLIFFORD BARRETT.
The Organic Unity of Philosophy. GEORGE ARTHUR WILSON.
Idealism, Mentalistic and "Speculative." JARED S. MOORE.
Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 8. April 12, 1934.

Professor Pratt on Speculative Philosophy. HAROLD R. SMART.
Once More unto the Breach! JAMES BISSETT PRATT.
Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 9. April 26, 1934.

The Status of Mind in Reality. C. W. HENDEL.
What is Materialism? SIDNEY HOOK.
Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 10. May 10, 1934.

Selection among Cosmic Images. HAYM JAFFE.
The Self, Given and Implied—A Discussion. EDGAR S. BRIGHTMAN
and DONALD C. WILLIAMS.
Abstracts of Papers Read at the Thirty-fifth Annual Meeting of the
Western Division of the American Philosophical Association,
Indiana University, March 29-31, 1934.
Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 11. May 24, 1934.

Whitehead, Descartes, and the Bifurcation of Nature. ALBERT G.
A. BALZ.
Book Reviews. Other New Books and Journals. Notes and News.

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The Growth of Bradley's Logic by Rudolph Kagey. 131 pp. (paper cover) 75 cents.

Responsibility. Its Development through Punishment and Reward by Laurence Sears. (Columbia University Press, 1932.) ix + 198 pp. \$2.50.

Value Theory and Criticism by Orlie Pell. 81 pp. 75 cents.

Realistic Ethics by Annette T. Rubinstein. 137 pp. \$1.50.

IN PRESS

Studies in the History of Ideas. Vol. III. Edited by the Department of Philosophy of Columbia University. (Columbia University Press.) 500 pp. \$3.50. Contents: John Dewey: *An Empirical Survey of Empiricisms*; M. T. McClure: *Greek Genius and Race Mixture*; Richard McKeon: *Renaissance and Method in Philosophy*; A. G. A. Balz: *Cartesian Doctrine and the Animal Soul*; S. P. Lamprecht: *The Rôle of Descartes in Seventeenth Century England*; F. J. E. Woodbridge: *Locke's Essay*; Howard Selsam: *Spinoza; Art and the Geometric Method*; J. T. Baker: *The Emergence of Space and Time in English Philosophy*; Rudolf Kagey: *Coleridge*; Sidney Hook: *Hegel and Marx*; H. W. Schneider: *Mill's Methods and Formal Logic*; Ernest Nagel: *Impossible Numbers; a Chapter in the History of Modern Logic*; Gail Kennedy: *The Pragmatic Naturalism of Chauncey Wright*.

Aristotle's Theory of the Infinite by A. Edel.

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THE JOURNAL OF PHILOSOPHY

EROS¹

PLATO first divides the world, then he brings it together. The Eros is the principle of relationship. I will begin with the division. We are all familiar with the distinction between the intelligible and the visible, the Good and the World of Shadows, the transcendental and the immediate. The clearest formulation is in the form of the contrast between the Limit and the Unlimited. Essentially these are not so much diverse worlds as diverse aspects of the one world, and as such I will treat them.

The Unlimited represents the phase of indefiniteness, exemplified well in the manifold of sense, in which one quality is indistinguishable from another and all things merge together. What are some of its characteristics?

First, the flux. The Unlimited is the aspect of instability, of the perishing of things. The world of immediacy is one of constant change; thus, it is impossible to designate any object in the manifold, because it passes. If I point to a white color, that color has already turned grey or black. There is nothing which I can call this or that; there are no objects; it is the realm of non-being. We may use as an illustration Plato's account of the democratic man. The latter has no fixed nature; you can not say of him that he is good or that he is bad. He is the prey of passing moods. In the morning he is greatly excited over philosophy, but his sporting friends come in to call and he soon decides that athletics is the thing. In the afternoon he reconsiders and drops in at a political meeting, but soon he tires and feels irresistibly drawn to a business career. By now, evening has come, casting all serious thoughts into obscurity, and our hero gives himself over to a good time.

Secondly, in the Unlimited nothing is in and for itself; being is relative, that is, by reference to a standpoint. For example, being is relative to a knowing subject. Nothing has an intrinsic nature. Hence, for every different subject, there is a different world. My world is private and incommunicable. There are no objective standards in terms of which different minds may control their experiences and so come together. Thus the Unlimited is a collection of unrelated private perspectives.

¹ This paper was read at the meeting of the Eastern Division of the American Philosophical Association, Amherst College, December, 1933.

Turn to conduct; here the Unlimited means a field of private interests at war with one another, acknowledging no obligation beyond themselves respectively. An appetite is a private perspective in respect of values; it is by nature selfish, absorbed in its own self-satisfaction, lacking any beyondness. At this level, we have the oligarchical man who is acquisitive, dominated by profit; he ignores the interests of the public; morally he is a monad without windows. Such a man finds himself isolated, friendless. Society is broken up into classes: the plutocratic minority, on the one hand, and on the other, the masses, pauperized and criminal.

Thus, the Unlimited is a chaos—separate bits of matter, of mind, of appetite, pressing about, without any common bond.

Thirdly, the Unlimited is the indiscriminate mingling of all forms and all things. It is objective confusion. In the manifold, there are no distinctions, but each thing passes into its opposite. Judgments are both true and false and neither; hence no significant judgment is possible, for thought is division. There is no individuality, for individuality is definiteness—being this, not that. Consider the poet: he is one with the river, and the forest and the wind and everything that touches his sensibility. He is in the present and also in the past, among the scenes he depicts. He is Protean and promiscuous, participating in all nature and all time. He has no central focus and no individuality of his own. Consider the actor. When Plato is criticizing actors (or imitators as he calls them) surely he has in mind not professional actors, but actors in life, in short, people with the dramatic temperament. They are those who whatever they do, are playing a rôle; they are addressing an audience, even if that audience be themselves. Suggestible to a degree, they are forever enacting a character from life or fiction; they live other people's lives; they have no character, no being of their own. They are the receptacle of the Timaeus.

In sum, the Unlimited has no fixity, has no bond, has no division.

In contrast with the above we have the Limit; this is the principle of definiteness and of structure, as exemplified in the system of universals.

The universals neither pass away, nor come to be; they are, and as such provide a fixed object for the mind, making discourse possible. In the realm of universals, we have otherness—that is, individuation. And they are what they are, not by reference to any perspective, but in themselves. *Ἀντὰ καθ' αὐτά*—things as such, non-referential; they exist by simple location (to borrow a phrase from Professor Whitehead) or in Plato's own words, they are simple entities. Hence the mind can grasp them without being committed to an infinite regress. The conception of a Platonic universal is the archetype of the idea of a substance subsisting in itself and under-

stood by itself. Universals form a systematic pattern in which each element has an intrinsic self-identity—is a that.

Now, the real is neither the intelligible as such, nor the sensible, but the mixture of the two—the mixed class of the *Philebus*. God creates the world by imposing order upon the chaos; thus, we have nature with its laws. In knowledge, the confused manifold, by being placed in correspondence with the pattern of concepts, achieves clearness and distinctness. Judgment is the mixture of the brute given with a what; discourse is the organization of sensations according to the categories of being and non-being, of identity and diversity, of relation and value.² Now, these notions are fixed for the mind, issuing as they do from the Good; hence the problem of a natural, objective language corresponding to these notions is raised, and this is the problem of the *Cratylus*.

Craftsmanship is procedure according to rules. Ordinary trade panders to the appetites and is selfish; the professional attitude is one in which the appetites are governed by an objective standard. It is a manifestation of the Eros. Craftsmanship is appetite transcending its own particularity, and meeting other appetites on the common ground of the Good. Take human nature. In the third book of the *Republic*, Plato advocates the ideal of the self-sufficient man.³ In contrast to the actor who lacks a self-identity, the self-sufficient man depends on nothing outside, he is non-relative; self-sufficiency is the conception of intrinsic being, of substance, of individuation through otherness. The self-sufficient man is the embodiment, in the material of human nature, of the aspect of the Limit as division and self-existence. The ideal of self-sufficiency has been a dominating conception in the history of ethics, colliding with the opposite ideal of man in nature and in society; and it is important to realize that such an ethical notion has roots in the metaphysical doctrine of intrinsic being.

The intelligible world supplies to impulses, fixed objectives, foci of integration, centers of individuation. In nature, in knowledge, in action, in appetite, the real is the mixture. The Eros is the author of the mixture and hence of the real world; it is the process whereby the multiplicity achieves harmony. And conversely, by its ingression in the sensible world, the realm of the intelligible achieves motion and life. Thus, the Eros is motion and the real world is a becoming—*γένεσις ἐς οὐσίαν*—⁴ generation into being.

The Eros is the love of Beauty and of the Good. Now all things desire the Good; further they desire nothing else; further, this love is not something casual; it is intrinsic to their being. In sum, all

² *Theaetetus*, 186.

³ *Republic*, 387d.

⁴ *Philebus*, 26d.

things crave the Good by their very nature. Thus, the Eros is the primordial attraction of the actual by the ideal. And this attraction is a symmetrical relation; God loves the world,⁵ Beauty imparts itself to things. In short, the Eros expresses the aboriginal relevance between the two opposites—the Limit and the Unlimited.

Just as Plato holds that experience is only the occasion for the knowledge of the universal, so he maintains that love of the particular is only the occasion for love of the Good. Plato is no more an empiricist as to love than he is as to knowledge. The concept renders the percept significant; so does the ideal dimly present in the actual render love of the particular significant. We already desire our ideal and then go about seeking an object toward which we might express that desire; love is recollection, it is *a priori*. This is the aspect of the inherent connection between the realms of transcendental things and of the flux.

The Eros is a *μεταξύ*—a principle of betweenness, as follows: Eros is desire. Now desire is neither immortal nor mortal; neither divine, nor human. Not divine, because desire implies a lack, a deprivation. The Gods, who possess everything, desire nothing. Not mortal, because total absence of the Good would entail absence of desire. Neither the completely ignorant nor the completely wise desire the truth. Desire is a mixture of being and non-being—it is a *δαιμόνιον*—a demon. Thus, it is an intermediary between the two realms, actively engaged in interpreting the Gods to men, conveying the commands of the ones, and the prayers of the others.⁶

The mixture is really a *mixing*: it is a process of bringing together; the passage of one metaphysical factor into the other. This brings us to the aspect of the Eros as activity.

To desire something is to desire that it should exist; desire is the impetus to action. Thus the Eros is a potency of movement—not of any sort, but movement with a direction. The Eros is process, but unlike Bergson's *durée réelle*, it is process toward a goal, the achievement of value. Of course, the Eros is not merely a human attitude, but a metaphysical factor for all Nature. Hence, Nature is a field for history—it is the realization of the Good—never completed. The real is change and becoming. This essay is really an amplification of Plato's dictum that being is power, that is, activity of agency or of patience—relationship.⁷ Movement is toward a fixed goal which is the Good. Hence, we have Rest as well as Motion. Moreover, the Eros is not directed toward the Good as a general objective; the Good is articulated in the universals: thus, the universals supply specific objectives to the Eros. And we could just

⁵ *Timaeus*, 29e, 30a.

⁶ *Symposium*, 202e, 203a.

⁷ *Sophist*, 247e, 248b.

as well state the matter from the other end. The Eros is the essences achieving their realization.

But what we desire to achieve we also desire to keep. There is the impetus to the preservation of values. Plato speaks of "saving" what is mortal.⁸ At this point, the emphasis shifts from the Eros of the Ideal to the Eros of the Eternal; for the desire to preserve is the desire for Eternality. Rather, the two desires are joined in one: we have the desire for endless possession of the Good. Yet things in the world of sense are subject to decay: all concrete achievement must perish. How then can we have enduring preservation of achievement? By pro-creation, whether bodily or psychological. Any objective work represents the endeavor of the individual to persist beyond his own perishing, by externalizing himself; thus propagation of life, inventiveness, political ambition, creation in art and science, all these are a result of the desire for immortality. It can not be too strongly stressed that there is no *Platonic love* in Platonic *love*.

Creativity is perpetual; the child must die, and therefore to obtain its own survival, it generates another child, and so on forever. Hence the Eros is not only becoming, it is transition, as exhibited, e.g., in the self-propagative drive of life. The similarity to Freud is striking. Both agree that love is a fundamental impulse. Both alike construe love in terms other than its obvious expression. And the difference between the two is a regular difference. For Freud, love of the ideal is a sublimation of sex; for Plato, sex is a sublimation of the love of the ideal. Stand Plato on his head, and you get Freud. But it is not true that Plato construes love in idealistic terms alone: the Eros has Plenty as its Father, and Poverty as its Mother—it derives from both being and non-being. On the one hand, it is rational love; on the other, it is a primitive impulse, earthly, rough, and squalid, weaving intrigues, shrewd, endowed with the practical intellect of instinct.⁹

Plato states that there is transition within the same individual.¹⁰ In the mind, nothing remains the same. Habits, feelings, attitudes, experiences, beliefs, all pass. Memory is not the persistence of the old, but the substitution of something new, for what has gone. The life of the mind is a perpetual perishing, and a perpetual renewal; this is the stream of consciousness, in which there is no identity of self, but a similarity of pattern, for as Plato says, we have on the one hand a passing away and on the other a birth of something like it.¹¹ Since immortality by self-identity is excluded, we have

⁸ *Symposium*, 208a.

⁹ *Symposium*, 203.

¹⁰ *Ibid*, 207d.

¹¹ *Ibid*, 208b.

the next best, which is immortality by substitution, and this is succession, transition to otherness. And this is duration. Time is the formal aspect of the Eros; there is a suggestion in Plato—no less definite because of its being only a suggestion—that time is the realization of eternity through limitation. The realization of the Good in finite form requires an endless succession of embodiments; it is as though an infinite series were arrived at by enumeration. Hence the Platonic universal generates an indefinite number of particulars in space and in time. This I believe to be the meaning of Plato's phrase in the *Timaeus* that time is the moving image of Eternity.¹² Thus, transition results from the conflict between the Unlimited and the Limit. The first makes for perishing; the second counteracts this by bringing about a renewed instance of what has perished, and the interplay of the two makes for transitivity. In sum, time is a mixture of Eternity with Mortality.

Thought, too, is a manifestation of the Eros. The vision of the Good, discussed in the sixth book of the *Republic*, comes at the end of an arduous pilgrimage, by a continued elaboration, step by step, of the material of sense. Plato holds that abstract conceptions are acquired, if at all, with difficulty and slowly, whereas sensations are native.¹³ Again, Plato attacks books, and the written word, in general, because it can not answer questions; it is thought crystallized, it is like a lifeless image.¹⁴ Thought is conversation, communication between minds, or a dialogue with oneself; thus, an interaction. Thought is an effluence of life. Plato speaks of thought as a living organism;¹⁵ that is, it is an adaptive response to the diversity of circumstance in the environment: diversity of questions or of data. For Plato, error consists primarily in dogma; for example, experience itself is not false; error comes by the taking of experience as the absolute truth—by the stopping short. Thus error is fixation, intellectual complacency. The action of the Eros upon the mind is to release it from tradition and conventionality in thought.¹⁶ In another connection, Plato speaks of enthusiasm as melting the rigidity of the wings of the soul.¹⁷

Thought is passage; theories must pass and be succeeded by new theories. A hypothesis should not be used as an ending-point, but as an "horme,"¹⁸ an impulse, a point of departure for further theories. Thought is wonder, question and answer, giving rise to

¹² *Timaeus*, 37d.

¹³ *Theaetetus*, 186c.

¹⁴ *Phaedrus*, 275d.

¹⁵ *Phaedrus*, 276a.

¹⁶ *Ibid.*, 265a.

¹⁷ *Ibid.*, 251b.

¹⁸ *Republic*, 511b.

further questions. Thus, thought is passage both among minds and among theories; the dialectic is the Eros operating in thought.

So far, the Eros has meant first, life, and second, more life. Further, it means better life. That is, the Eros is a factor of progression, with, perhaps, a consequent change of pattern. In the *Symposium*, Plato depicts the Eros as the ascent from the love of the individual to the love of the collectivity, from the love of the concrete to love of the abstract, culminating in the mystical vision of Absolute Beauty, beyond conceptual formulation and beyond art.¹⁹ Here we are presented with a logic of desire, with the Eros as an inductive process leading to more and more generalized loyalties.

Corresponding to the ascent, there is also the descent; we have both progression and retrogression. Nothing which participates in the sensible world, can remain. In man, in society, in knowledge, in nature, we have the alternations of a rise and a fall. Human nature exhibits the rhythm of movement and fixation, routine and spontaneity, with intermittent and momentary insights into the final Good. The Greeks were fascinated by the theme of the degeneration of man. There are not only the dramatic tragedies, there is also Thucydides, whose account of the decline and fall of Athens is perhaps the greatest of all the Greek tragedies. The fall comes about through insolence, that is, self-attribution of achievement, loss of self-transcendence. In the eighth and the ninth books of the *Republic*, Plato gives a graphic account of the degradation of man as an individual and as a group.

Not only human nature, but nature in general exhibits alternation. There is a cycle of cosmological epochs in which a period of a reign of order is succeeded by an epoch in which the maximum of confusion and chance obtain. This I take to be the moral of the myth in the *Politicus*.²⁰

It thus appears that the mixture is not a static fact, but something in process of achievement. We should speak not so much of the togetherness of the Limit with the Unlimited, but of the becoming of the togetherness. The concrete fact is a tendency. There is not only the becoming, but, if I may use the word, the un-becoming, corruption as well as growth. What is it that brings about decline? Plato sometimes toys with the idea of an independent principle of destruction, an evil soul, but he never commits himself to this view. So far as I know, there is no metaphysical principle of evil in Plato's system. The Receptacle on which the Demiourgos operates, is not evil, but neutral. In the *Timaeus*, Plato posits both

¹⁹ *Symposium*, 211.

²⁰ *Politicus*, 270-274.

teleology and mechanism, and mechanism coöperates with purpose, *as far as possible*.²¹ Here we have the clue. We have the coöperation, and also the limitation upon that coöperation imposed by the fact that they are two distinct principles. In short, there is the relevance between the intelligible and the sensible, and there is also the distinctness. The connection between the two is in the nature of a polarity, with a phase of attraction and a phase of repulsion. The phase of attraction is the Eros, life, ascent; the phase of repulsion is descent, and dissolution. Nature arises from the mingling of the two diverse metaphysical factors: the factor of definiteness and the factor of objective confusion; there is necessarily a conflict, a resistance, a duality which are continually being overcome, but never finally resolved.

And so we come to the Psyche. The psyche is the principle of movement and change, both of growth and of decay, of composition and of dissolution. Plato arrives at this doctrine by contrasting the two kinds of movement, passive or inert, and active. That is, there is motion in a thing which is caused by motion in another thing; but such motion can exist only if there is a first, an origina-tive motion. This is the psyche, which is defined as the source of change, as inherent spontaneity. And, unlike Aristotle's God, the psyche is itself a motion; in short, the psyche is self-activity, generating motion in other things.²² It never ceases from generating motion. Further, the soul originates motion in a definite direction, namely, for the realization of the Good. Thus, the psyche is the basis of the Eros.

The psyche, as Plato states in the *Republic*, issues from the Good;²³ it is also founded on the Receptacle. In the Receptacle, there is irregular, surging motion; Plato identifies the Receptacle with the maternal principle of vitality, which is impregnated by the eternal things. The Eros, then, issues from this reservoir of life; it is a transformation of this potency into directed movement. We have a hierarchy of movements in Plato's system: the movement of inertia, then life, then psychological activity, and at the end, *nous*,²⁴ that is, the movement of the dialectic; the rank in the hierarchy being determined by the degree of control of movement by the principle of order.

In this paper we have indicated three notions as fundamental to Plato's system: the Limit, the Unlimited, and the passage between the two, which is the Eros. The Limit and the Unlimited, taken as independent entities, are abstractions. The completely

²¹ *Timaeus*, 46d.

²² *Laws*, 896a, 897a; *Phaedrus*, 245.

²³ *Republic*, 508b, d.

²⁴ *Sophist*, 248e.

real is a relational complex: the relation of these terms. In the early dialogues, Plato speaks of the intelligible world as subsisting independently of the world of generation. How can this be reconciled with the account of Plato given in the above paragraphs? We must be careful not to represent Plato as having a consistent and definite system. Plato is himself the Eros. Thus, there is also the rejection, in the *Sophist*, of the doctrine that the real is without motion and life.²⁵ However, we may consider the following suggestion: for Plato the ultimate fact is the polarity between the Limit and the Unlimited. Polarity includes both relevance and distinctness. There is the aspect of the transcendence of the Intelligible world, and there is the aspect of the immanence of the Intelligible in the Sensible.

In sum, the real world is an enduring activity—a perpetual process, self-generating, and renewing itself, directed toward the achievement of value. This value must be conceptually apprehended before it can be pursued; hence the process has a mental phase. At the other end, the activity is rooted in the violent irregular motion in the Receptacle—hence there is also the brute, irrational phase.

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SPECIFIC QUALITY

IN this paper quality shall denote specific or immediate quality and only such quality. It is assumed that the natural world as revealed in consciousness contains specific quality. Various theories of quality have appeared in the career of philosophic speculation. It is not, however, the aim of this paper to trace the historical course of these doctrines. My purpose is to defend certain propositions concerning the metaphysical and logical status of specific quality. I find that many contemporary philosophers deny these propositions with the consequent introduction of myth into their philosophic thinking.

Let us admit that the same specific quality can be situated in different parts of space at the same time or in the same or different parts of space at different times, or at different times in a temporal series without spatial character, if there be any such. What follows from this assumption? That a quality has pictorial or qualitative being when it is not the quality of some event in a present perspective? That it subsists in a realm other than that of the

²⁵ *Sophist*, 248e.

flow of natural events? Such implications are arbitrary. I hold that a quality has qualitative being only when and where it so exists. This, I admit, should be a truism, but since it has been denied it is not an otiose truism. Qualities have qualitative being only when they qualify the natural world. The fact, which I take for granted, that they can be present in events at different times is an interesting, important, and distinguishing trait that they possess. If subsistence is defined to indicate nothing more than that, then specific qualities subsist. In other words if subsistence and universality are synonyms qualities can subsist, for they are assumed to be universals.

Why has this position, seemingly so simple, escaped philosophers of great acumen? They have thought that the lasting possibility of referring in discourse to a quality requires that the quality subsist qualitatively in a non-natural realm. Consider. It is significant to say that a certain specific quality is not situated in the present spread of events. Indeed this is the case of every such network of events with reference to some specific qualities. If this is the case, then *it* (the specific quality in question) does not subsist qualitatively at present. (The limitation "at present" does not mean what is assumed, namely, that it is not situated in the present natural spread of events, but that it does not subsist in any other realm which, by *accidental* reference to the present state of nature, can also be called present, since it is "simultaneous" with the present.) I purposely italicize the word "*it*," for certain thinkers maintain that this reference to "*it*" reinstates the qualitative subsistence of the quality, thus casting the blight of self-contradiction on my assertion that "*it*" does not subsist qualitatively at present. However I fail to see any contradiction in admitting these two propositions—A certain quality is not a quality of any event in a present memory or perceptual perspective and *It* does not subsist qualitatively at present. Indeed if it were necessary to summon a quality into being in order to refer to it, these propositions would be inconsistent. But it is obvious that we often refer to a quality without conjuring it into pictorial being. The point is that if reference to a quality necessitated the qualitative being of the referent at the moment of reference it would be impossible to suppose that it has no qualitative being at that moment which is simultaneous with the present warp and woof of events. How, then, is it possible to refer at present to a quality which does not now subsist qualitatively? The answer seems obvious. The fact that this quality once existed is sufficient to act as the required object of the reference.

An absolutely specific quality is an entity capable of being multiply-placed in time or in space or in space and time. In this sense

and only in this sense is it an eternal object. It can not be located at one and only one position in a given time series or spatial field. This, however, does not mean that if the natural world were annihilated (admitting for the moment this non-sensical proposition) the qualitative subsistence of specific qualities would be undisturbed. Indeed, they too would be annihilated, for they are only certain repeatable traits of the natural world and would sink with the ship of which they are passengers.

An absolutely specific quality that shall never be "exemplified" has no qualitative subsistence, is a sheer myth. That only can have qualitative being which has existed, exists, or will exist. I know of no valid argument ever adduced to prove the necessity of admitting such entities. And I see no empirical ground for accepting them. They remain decorative products of unnecessary assumptions.

Exemplification and ingression of specific qualities (eternal objects of a sort) can be spoken of only in a metaphorical sense. The specific quality does not alight from on high into this world of change. It exists only in this world. Exemplification should indicate only that the present specific quality may now exist elsewhere or may have existed in the past or can exist in the future. Indeed, it ought to signify nothing save that the present entity is a universal.

Every specific quality persists through a temporal interval. This temporal aspect is empirically necessary for its being. To argue that since the specific quality may remain identical throughout this temporal span it is not itself temporal, is unconvincing. Empirically, every subdivision of its duration is also a duration. To say that it is our intuition of the quality that lasts and not the quality itself assumes the point at issue. Then there are specific qualities that require a temporal period in order to be. The type of such specific qualities is a melody. To assume either that a melody is composed of a series of non-temporal qualities or that it is a dateless essence containing a temporal perspective does violence to the obvious facts, and makes nonsense of continuity. Time is necessary for the very being of all absolutely specific qualities. This is not inconsistent with asserting that they have no *one* position in the order of time and space.

There are novel specific qualities (eternal objects, esthetic essences). Indeed it seems clear that certain specific qualities can exist now which never existed previously. All creation in art and music gives evidence of this. It is not, of course, necessary to refer to such exceptional cases, for at this very moment I am causing new qualities. I can understand why Santayana denies that any quality can be novel, for that tenet is involved in his non-natural defi-

dition of subsistence. But I think it is a wholly unnecessary thesis. It is true that *novel* refers essentially to a past time series. A specific quality is novel at a stated time if no quality identical to it occurred in "all" the time previous.

I am evidently making specific quality a being with a peculiar history. The cosmic biographer in writing the history of a given specific quality may say—Quality nine thousand and ninety-nine appeared on the cosmic stage in 180 B.C. during seconds fifty and fifty-one of 4 A.M. of January 12th of that year in this and this spot, then disappeared to reappear at this spot and that time and also in that spot at the same time and then disappeared to appear, etc., etc. If the quality really appeared for a first time and for a last time, it has a date of birth and death. Obviously since one can not verify whether a given quality has appeared for the first or last time, this has not great value for specific judgments as to novelty. Yet that *some* qualities are novel seems to be a plausible thesis. I do not say that *every* quality must once have been novel. About that no evidence seems to be forthcoming. Yet surely it is plausible that the creation of, say, the saxophone has produced sounds wholly novel in the history of the cosmos.

There is no realm of esthetic essences prior logically or temporally to the natural world. Esthetic essences are aspects of every present slice of nature. They are the immediate qualitative aspects of the flux. The idea that the garb of every event must come out of an "antecedent" pan-inclusive storehouse or museum, that has an inexhaustible permanent overstock, is a useless thesis tied up with a faulty definition of subsistence.

There is no realm of truth in the sense that this realm is a non-temporal painting in terms of qualitative essences of the happenings of nature. The realm of truth is an aspect of nature—nature as *able* to enter into situations of reflective inquiry and as controlling the truth-value of the propositions involved in such inquiry. The theory that a synthetic picture from no particular standpoint constitutes the truth about an event represents, to pass over the questionable assumption of such a standpoint, a confusion between presentative immediacy and inferential knowledge. In addition a "*synthetic*" picture existing in a subsistent realm is an unverifiable entity. A history congealed into a picture is a striking literary phrase, but unfortunately it points to nothing empirically given.

The possibility of a specific quality is not itself qualitative. I may hold in my left hand a glass containing a blue liquid and in my right one containing a green liquid and assert that a certain specific visual quality will result if they are mixed. If this as a matter of fact will occur, then the predicted specific quality will be a property of the antecedent situation, but it will not necessarily exist *any-*

where qualitatively at that moment. In this case, possibility is a proleptic characteristic of the antecedent situation, but it is, of course, not a *pictorial* characteristic nor need it then exist pictorially anywhere.

The concept of a specific quality is, of course, not itself a specific quality. It is the class of all specific qualities matchable with the given specific quality. To assume, then, that the concept would have being if there were no specific quality of its class is meaningless. The same class would result if any other member of the class were taken as the standard. The concept may also be considered the *type* of the set of performable operations of matching with the given specific quality. The concept is either the standard operation or the class defined by that operation. The classifiability of the specific quality is its concept antecedent to the actual classification by matching.

There are *novel* concepts. Indeed there are novel specific qualities. And every such novel specific quality creates the concept that is its possible definition. Thus a certain temporal aspect is introduced into concepts.

The claim to indubitable knowledge of specific quality is nothing but a mirage that promises a paradise of omniscience and cognitive bliss, but finally leads to intellectual penury and abstention. Immediacy, far from being the cognitively certain, is not knowledge at all. Dewey has justly asserted again and again that qualities *per se* are had and not known. All knowledge is extrinsic to its subject-matter. It is about its subject-matter, but is not literally identified with it. Indeed, consider the propositions which can be asserted about a specific red color—that it is a pleasant color, that it is correlated with a certain wave frequency, that it was a favorite color of Keats', etc., etc. Such assertions are genuine and extrinsic. To gape open-mouthed at the color is not to *know* anything about it, and to assert that it is what it is offers no information, being taken for granted in all genuine assertions about the color. What is presupposed in all real propositions is itself a mockery when offered as information to someone inquiring about a certain matter.

Specificity or immediacy is a trait of all objects, intra-experiential as well as extra-experiential. With Dewey I base this thesis on the principle of continuity. However I do not lay claim to certainty about such an appeal to a principle of continuity. It has often been abused. Empirically it is a fact that certain objects upon mixing or coming together bring about a state of affairs with different qualities. Qualified things in interacting bring about a differently qualified thing. Analogously extra-experiential qualified things in interacting bring about the intra-experiential qualified

things. I can maintain such a position even though no *specific* quality of this extra-experiential sort can be pointed to.

The arguments adduced to prove that *all* specific quality is mental are unconvincing. Even those adduced to prove that *certain* qualities are mental succeed only in showing that they are perhaps organism-dependent for their very being and appearance. The problem of the ontological category in which *all* qualities fall is tremendously difficult. To treat the problem as if the mental, physical, and logical exhausted the ontological categories is not very illuminating. There is the difficulty of strictly defining the mental. The physical it is true offers fewer difficulties. However to dump everything that does not fall into the physical and mental into the maw of the logical is not to be very discerning. On what basis should qualities and relations both fall into this category? My confusion becomes uncomfortably intense when logical being is finally said to subsist independently of physical and mental being. The latter may go hang for all logical being cares. It should be noted that I do not affirm that *no* quality can be mind-dependent in any sense. I think *certain* qualities can be said to be mind-dependent and yet not mental. This sounds paradoxical, but is really commonplace. If it were a fact that physical action guided by mind resulted in a certain qualitative situation which possessed a quality which *could* not result otherwise (i.e., by *accidental* action), it would be possible to call such a quality mind-dependent in that sense. I assume that this is often the case, although I don't feel that I could adduce any convincing argument to support it. To me it seems more than plausible that the sound produced by a complicated chord on a piano *could* not have been produced by nature spontaneously. I feel certain that this is the case with *some* qualities produced by products of art, although I would not be very certain that this is the case with any given specific quality produced by art.

Certain specific qualities, those that are novel, can never be predicted. This is tautologous. Indeed they were in no sense possibilities prior to their first actualization. To assert that every actual quality is a possible entity is sound, but it must be borne in mind that it *becomes* a possible quality only on the basis of its past actuality. Thus an element of radical contingency is present in the natural world. To reduce *all* elements of specificity in the present natural world to a past state is an impious and wholly ungrounded faith.

The greater number of specific qualities are wisps of being, enjoying evanescent existence in the natural world, but with no permanent qualitative lease on being in any other world. So they remain unnamed, for why name the fleeting and rare? Indeed, how name such puffs of being? Yet it is possible to have standards of certain

recurring specific qualities.^o A series of many different shades of color can be made. I obviously can not say *all* possible colors. For I do not think such a series is even theoretically possible. There may be no "all" when it comes to *infimae* species of colors. This incomplete series of colors may be used as a standard to settle disputes about colors. My friend says this cloth is blue of a certain shade and hue. I claim it is green of a sort. We go to the standard series and match it with different colors, located at different spaces in the spectrum of colors. The conclusion is that one of us is color blind. If it is inquired whether the standard color has *really* remained unchanged between the intervals of looking at it, I answer: there perhaps is no identical color in the visually unsensed physical standards. In addition we don't know that it has really reappeared unchanged. By this I mean we don't know without doubt that the new qualitative apparition is identical to the past apparition. Yet we can proceed as if this were so, since we can not help believing what seems to be so. We have tuning forks and color series but no pain series and pleasure standards and taste standards, for the conditions on which they depend are not subject to any great degree of control. So they serve no significant intellectual function.

Recent philosophers have so hopelessly floundered in speaking about science that I approach a statement about the connection of energetic transaction and specific quality with fear and trembling. May no scientist flay me for speaking nonsense, but may he take up my account of *prima facie* facts into a higher synthesis in which my wobbly "truths" secure stable status. I accept McGilvary's account of perception in his article on "Perceptual and Memory Perspectives." It seems that there is no energetic transaction between the focus of a perceptual perspective and its contents. On the basis of certain energy transactions, between the molecular colony that is the physical object, the molecular medium and the molecular sense organs, nerves, and cortex, a perspective pops into being. Now I hold, and this is a commonplace in ordinary discourse, that the organism reacts to the specific qualities of the perceived objects. In other words it reacts to *pictorial* universals, for all qualities are such universals. Thus universals of this sort are often responsible for physical action. In this sense they are dynamic. We often desire universals and not unrepeatable entities. Specific qualities are inert in the sense that they do not cause the perspective in which they appear, nor do *they* react on brute things. They are dynamic in that they are a causative factor in *subsequent* purposive behavior. They really react at a distance.

To recapitulate, specific qualities are universal, subsistent in the sense of universal, eternal in the sense of universal, capable of in-

gression and exemplification only metaphorically, presupposed by their defining class, in certain cases mind-dependent, but never mental, and last, dynamic in that they often induce at a distance and without energetic transaction purposive action in human beings.

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BOOK REVIEWS

Idealism: A Critical Survey. A. C. EWING. London: Methuen & Co., Ltd. 1934. viii + 450 pp. 21 s.

This careful and judicious survey must be placed high on the list of recommended reading for that large class of American philosophers now controversially involved in the identification and evaluation of "idealism" as a philosophy. The idealism here analyzed is "the view that there can be no physical objects existing apart from some experience" (p. 3). Mr. Ewing recognizes that the term has other uses, but considers their precise specification unimportant since, "the term will soon die out except as the name for a past movement" (p. 5), and meanwhile it is important that we should draw on the resources of both idealists and realists for such insight as each can still afford. That current British thought, especially of the Cambridge School, may learn something of value from idealism, even while rejecting its central doctrines, is the thesis here presented and impressively verified in a detailed examination of epistemological idealism, the internality of relations, the coherence theory of truth and allied subjects.

It is difficult to see how, within the limits of Mr. Ewing's survey, a better job could have been done. The treatment of Bradley and, what is more uncommon, of Bosanquet, is sympathetic and understanding, the analyses patient, exhaustive, and meticulously exact. Not only does the author help to clear up a number of current confusions, as e.g., that of representative perception with indirect cognition of physical objects, but on at least two main points he makes important modifications in the "realistic" doctrine from which his view of knowledge is derived. Thus (1) he defends coherence as a criterion of truth (p. 236), and (2) he holds that causation involves a rational connection such that "the world known by us constitutes a system in which every particular is linked to the rest of the system by a relation of logical entailment" (p. 187).

The whole survey, however, is rather narrowly restricted. The issues discussed are mainly those of the theory of knowledge and of perception; metaphysical problems get but a single chapter, and that the least satisfactory in the book. The theories analyzed are almost

all British (that of Kant is the one notable exception) and contemporary. And the analysis is of that "minute" variety, customary at Cambridge, in which a hair perhaps—or even an epithet—divides the false and true, while facts that might have altered the verdict had they been considered before a verdict was reached, are disposed of with a rather high hand. Thus Mr. Ewing's theory of physical objects is a model of ingenuity, and the conclusion reached that we have "a partially valid, non-inferential cognition" (p. 326) of physical objects which are "groups of unsensed sensa; i.e., of 'entities which, as far as we can tell, are not themselves sensed immediately by any percipients but are exactly the same in kind as the objects that we do immediately sense in perception'" (p. 357), has a shade of advantage over the alternatives considered. But the evidence of the physical sciences, and of the use that scientists make of physical objects, as Meyerson, for example, has presented it, does not get counted at all. Hence we are left to wonder whether a different selection of evidence might not have justified a very different conclusion. Within the limits of its current preoccupations, British philosophy at its best eventuates in just such precise, sensible, and inconclusive analyses as this. Whether those limits themselves need revision is a further question which Mr. Ewing does not raise.

A. E. M.

La Nature de la Connaissance et l'Erreur Initiale des Théories.
HENRY LEENHARDT. Paris: Félix Alcan. 1934. 351 pp. 35 francs.

The nature of knowledge, according to M. Leenhardt, is essentially biological. That does not mean that truth is to be measured by "survival value," though it undoubtedly has survival value. It means rather that the various kinds of knowledge, conceptual as well as sensory, are conditioned by the animal organism; that the fundamental concepts of science and philosophy are refinements upon the animal's adjustment to his environment. Such a thesis could lead perhaps to a variety of developments. In this book it leads to epistemological dualism, the difficulties and advantages of which are clearly seen by the author. The author is himself a biologist as well as a philosopher.

G. B.

The Spirit of Language in Civilization. KARL VOSSLER. Translated by Oscar Oeser. (International Library of Psychology, Philosophy and Scientific Method.) New York: Harcourt Brace and Co. London: Kegan Paul, Trench, Trubner & Co., Ltd. 1932. Pp. vii + 247.

Without aid of the title page, the reader of this book would speedily be made aware of its German authorship. For it is essen-

tially and characteristically German, combining in piquant blend scholarly erudition and audacious speculation. Again without the information contained in the dedicatory letter to J. E. Spingarn one would recognize it to be a collection of separate papers strung together on the thread of a common theme. Its nine chapters dealing with varied aspects of language are quite clearly so many essays. And these prove to be uneven in scope, in interest, and in plausibility.

The book, however, as a whole is provocative. Its erudition is devoid of pomposity and it is speculative in the best sense of that word—filled with tentative though far-reaching suggestions as to the psychological implications of language—as to its meaning for culture and for the life of nations.

At the outset a distinction between language and mere conversation is asserted. "The difference between language and conversation is that the former is unthinkable without a plurality as well as a community of persons. A single person, in however many parts and situations he may express himself, can never produce language, only conversation" (p. 14). Later on the author has much to say about these language communities, the essay on this subject being much the longest in the collection. That the genus has many species is indicated by the following observation: "Not every language community is at the same time a community of peoples. A language can bring men together in a hundred different kinds of communities. Latin, to begin with, was the language of the Latin race. In the course of time it became the language of the Roman state, then the language of the Catholic church, and finally the paper language of scholars" (p. 120).

As to the origin of tongues with their characteristic differences, Professor Vossler is emphatic that not environmental nor even ethnic factors but *use* must be held responsible. "In the light of modern science no one dares to believe that climate and the nature of the soil have any influence on the speech of man. Nor has it ever been proved that there is a necessary connection between races and their language forms" (p. 81). And yet the bond between the ways of thought and action of peoples and the language forms which they evolve is an intimate one. It is now clear, we are told, "how each race fashions its own *Weltanschauung*, or rather the potentialities of a *Weltanschauung*; how by their language and through their language nations unfold their spiritual characters into living relationships and interactions; and how there rests in the lap of each language a kind of predestination, a gentle urge to this or that way of thinking" (p. 131). The language that they speak becomes, moreover, to nations an important symbol of their national integrity.

"Tolerance of national languages is a . . . later, tenderer form of human culture . . . if I throttle my neighbour's mother tongue in order to impose my own on him, what excuse can I have except that of conceit, which is made no better by the fact that it is a national conceit? For my neighbour's language is his inner eye, his form of thought, with all its potentialities of expression, his spiritual childhood and future" (p. 132). It is therefore to the credit of the ancient Romans that "they never made war on the languages of the countries conquered by them" (p. 118).

But languages, because they have their being in use and because they must reflect living, changing thought, are not static, which means inevitably that they become increasingly differentiated. Even knowledge and interests shared by different peoples are variously reflected in their speech, fostering a continuous alteration of it conforming to the individual genius of their race. "The characteristics of individual minds are not destroyed by common tasks and common competition, but are all the more emphasized, and instead of remaining potential are forced into the light of achievement. That is why the differences between Italian and French, or between French and German, have become greater rather than smaller since the rise of the natural sciences. The essential differences in the structure of the sentence in the Romance and the Germanic languages, and between the order and the formation of words in French and German, as well as differences of accent, were less pronounced in the Middle Ages than they are now" (p. 204). Even borrowings are a manifestation of the ultimate individuality of each national speech. "I should like to believe," Professor Vossler observes, "that the creativeness of a people with regard to sentiment and feeling is better studied in its so-called loan and foreign words, than in its linguistic heritage" (pp. 185-186). This view is, of course, plausible, inasmuch as in the case of deliberate importation of foreign terms there is scope for the exercise of conscious volition controlled by national taste. That it is, however, in the last analysis the genius of the language itself that determines its growth is the view of the author. "In every national language there is an aesthetic will, a master builder. We do not attribute this force to a language, or invent it; it is the linguistic, individual unity of the language itself" (p. 137). Language as thus conceived is, so to speak, itself the artist. But it is also an art, subject to the laws by which all art must be evaluated. It may be compared with architecture. "In language as in architecture all meaningful ornamentation has a utilitarian function. The more closely ornament and structure are interwoven, the more style a language will have" (p. 136).

Of all the sections of the book the most interesting is the fourth

chapter dealing with "New Forms of Thought in Vulgar Latin." Its purpose is to demonstrate the interplay between a changing language form and a changing intellectual orientation. A most fascinating series of speculations is what we are here treated to—speculations which with all their daring appear for the most part plausible.

The first item of change discussed is that of word order. The simpler and more straight-forward structure characteristic of vulgar Latin is interpreted as evidence of a more objective attitude, a shift from the ego-centric to the altro-centric point of view. "In high Latin, the word order shows that the mental and spiritual interests of the speaker take first place, in Vulgar Latin those of the listener" (p. 54). "When the speaker of Vulgar Latin begins to attune his sentences to the ear of his listener rather than to his own natural inclination he begins to forsake the naïve ego-centricity, individualism, and anthropomorphism of the classics. In his language he gradually develops the capacity for brushing aside the atmosphere of his personal feelings and entering that of others" (p. 55).

A further indication of this postulated shift toward greater objectivity is seen in the gradual decay of the passive form. The substitution of active for passive was a symptom of recovery from anthropomorphism, inasmuch as it was by means of the passive that states of suffering and feeling were attributed to the inanimate. Furthermore the scope and meaning of the active voice became altered as the passive voice fell into disuse. "It becomes wider, more neutral, and, as it were, more soulless. For natural events, for psychic experience, for emotional suffering and for purposive action there is only one verbal genus" (p. 56). But if new mental attitudes affected linguistic forms, these in turn were a provocation to further changes of mental orientation—"a stimulus towards a new way of looking at things."

Like the passive voice, the modal forms—supine, gerundive, and future participle—were instruments of superstition. "They all express an immanent destiny, a natural fate, which is at work in the processes of the universe, in human activity, in organic life, and in events as such" (p. 59). It was only natural, then, that they too should have fallen into disuse. The widening of the domain of the indicative mood is similarly explicable. For example the use of the indicative in place of the subjunctive after *quod* is taken as evidence that "the interconnections of things and events were no longer felt anthropomorphically and mystically" (p. 71). It becomes appropriate to employ the indicative in dependent clauses because "To say or to believe something does not mean that it exists" (p. 70).

That the future tense should have gone the way of these other

classical forms is to be accounted for quite simply as the result of popular tendencies. "There is hardly a language in which it [the future tense] is regularly used by the common people" (p. 61), and the reason is that the purely temporal conception of the future was always weak, the natural man's attitude being one of willing, wishing, hoping, and fearing.

Whether the undeniable fact of the "corruption" of classic Latin warrants all the psychological implications which Professor Vossler postulates must be left to the decision of the reader. Certainly without a complete reading of this chapter the passage with which it concludes must appear unduly confident and rather wildly speculative. "The Latin of the common people," we are told, "moves and aspires from anthropomorphic, deterministic, intellectualistic forms of thought towards dualistic, concrete, practical, voluntaristic forms. From the mythical, pantheistic conception of the world it proceeds to the symbolic, the deeper, more psychic conception and presentation, thereby paving a way through language to the thought of the Middle Ages and of Christianity. Indeed, it is the road on which the Latin peoples progressed from antique to Christian ways of thinking" (p. 75). That the entire volume, and this chapter in particular, merits careful reading is in any case the opinion of the present reviewer.

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Die Urform der "Computatio sive Logica" des Hobbes. BARON CAY VON BROCKDORFF. Kiel: Karl J. Rössler. 1934. 33 pp. 1.80 M.

Von Brockdorff adds to his previous contributions to our knowledge concerning Hobbes by printing with editorial comments a brief manuscript in Hobbes's handwriting from the Hardwick Papers in the possession of the Duke of Devonshire. The manuscript is in Latin and extends to a little more than four thousand words. It is a brief summary statement of the logical position which Hobbes developed in the first six chapters of *De Corpore*. Von Brockdorff estimates that it was written in 1653.

No growth or change in Hobbes's ideas can be traced between this brief writing of 1653 and the *De Corpore* of 1655 except possibly in one respect. In 1653 Hobbes wrote: "Philosophia est corporum proprietatum ex conceptis eorum generationibus . . . cognitio." In 1655 he altered the statement to read: "Philosophia est effectum sive phaenomenon ex conceptis eorum causis seu generationibus . . . cognitio." The change from properties to effects or appearances (as his Latin is translated in the English version of

De Corpore in 1656) seems to indicate two things. One is the more complete abandonment of the Aristotelian conception of substances with their properties to the modern conception of nature as a system of mechanistic forces. The other is an increasing affiliation with the seventeenth-century conception of the qualities of sense-experience as mental consequences of the impact of external bodies. There remained to the end, however, considerable confusion in Hobbes's philosophy of nature, so that it is hard to put too much weight on single words in passages like those quoted.

S. P. L.

La vie de Frédéric Nietzsche d'après sa correspondance. Textes choisis et traduits par GEORGES WALZ avec une préface biographique du traducteur. Paris: Les Éditions Rieder. 1932. 567 pp.

Détresses de Nietzsche. LOUIS VIALLE. Paris: Félix Alcan. 1932. viii + 155 pp.

Ernst Bertram: Nietzsche, essai de mythologie. Traduit de l'allemand sur la septième édition par ROBERT PITROU. Paris: Les Éditions Rieder. 1932. 469 pp.

To a student of philosophy the accidents of person and circumstance are a distraction from his purpose, which is to understand theory for its own sake on its own terms, and yet they are an accessory to that purpose, whispering their commentary between the printed lines. They are seldom more distracting and more necessary than in the case of Nietzsche; they must be used, and resisted. In this sense the three books here reviewed can be recommended to philosophers.

Nietzsche's letters are least distracting from theoretical analysis because through them he speaks in his own person. They are good reading, and besides the story of his life, which they present quite well, they afford intimate glimpses of personal relationships as not many letters of great men do. One learns thereby something of what it might have been to know and converse with the man, and retains a sense of human qualities not so readily obtained from his formal writings. Here and there direct comments on his ideas occur, and most important of all, one finds reflected something of the fiery anguish in which the philosophy was forged. This is not to say that the letters solve ultimate riddles, but they are one valuable approach.

A selection from the bulky and expensive complete correspondence is useful for all except specialists, and M. Walz has done his work well. The selection is larger than those which have already appeared in German and English, and has been provided with

facilities for reference more ample than theirs: explanatory notes, an index of proper names which identifies the less known, an index of passages which refer to Nietzsche's works, an index of letters by correspondents, and a summary of the contents in chronological order.

The correspondence is so rich in material that many good choices are possible and all are debatable. Of the letters to Gast, for example, M. Walz has slighted a number which are more interesting to a philosopher than those which he has included, doubtless because the primary purpose of his selection is biographical. Yet the reviewer would suggest that M. Walz might have enhanced the value of his work if he had permitted himself greater liberty in the use of the scissors, cutting some letters more drastically to make room for other important passages. An otherwise dull letter will sometimes contain just a few lines which suddenly illumine deep vistas like a stroke of lightning.

Special compliments are due to M. Walz for his clear, sympathetic, yet dispassionate biographical preface, which condenses about the salient facts an unusual amount of their significance. It is the best brief biography of Nietzsche known to the reviewer, and strikes the balance of justice better than most longer ones.

The monograph of M. Vialle is a psychological essay. It does not profess to pass judgment on the truth of Nietzsche's philosophy, nor does it attempt a complete portrait of the person. The author treats one major theme in the inner life of his subject as an illustration of his psychological theory of *divertissement*, to which he alludes only in the preface of the present work. Taking the writings of Nietzsche as his data, he interprets them as the expression of an irreconcilable conflict between the desire for salvation and an ascetic intellect. The basic condition is incurable physical maladjustment. Confronted with this, the instinct of preservation seeks to escape the suffering self and take refuge in the absolute, but a lucid intelligence soon destroys the healing phantasy by discovering its hidden relation to self-interest. Thus the struggle alternates between illusion and disillusion through stages which the chapter headings indicate: "The Religion of Pity," "Aesthetic Redemption," "The Cult of Truth," "The Superman," "The Eternal Recurrence."

Psychological explanations of philosophy will doubtless always seem shallow to philosophers, and the reviewer prefers to leave the merits of M. Vialle's psychology to the competence of specialists. But the work also gives an interpretation of Nietzsche's thought, and in this the author has stylized the material more arbitrarily than the reviewer would consent to, has not shown himself sufficiently self-critical, sufficiently aware of the baffling complexities

of his subject and of the possibility of alternative hypotheses. He treats contemporary inspirations—the superman and the eternal recurrence—as successive, and generally emphasizes the mutations of Nietzsche's thought at the expense of its real underlying continuity of growth and struggle toward comprehensive synthesis. It is doubtful if Nietzsche ever made a cult of truth in quite the sense meant by the author, and there is no evidence that he ever embraced the religion of pity at all.

Nevertheless M. Vialle has made his hypothesis interesting, and the work has value apart from its psychological thesis, as a study of some of the chief problems with which Nietzsche wrestles.

Professor Bertram modestly styles his book "an attempt at a mythology," and explains in the first chapter that, since great men are newly incarnated in the mind of each age, he aims to capture only the image of Nietzsche as it lives for our generation, and that he does not claim it to be the last, truest, or most profound of possible interpretations. Although intuitive in its treatment, this work is in a class apart from the contemporary school of creative biography, for it is justified by depth of understanding and supported by a familiarity with the documents which few can equal. The wealth of telling quotations would be enough to redeem it, and they could only have been gathered by love, patience, and insight. Indeed it is specially these qualities, rather than any neat *a priori* theory, which the author brings to his subject.

Symphonic in structure, the essay weaves many themes into an intricate whole, displaying amazing skill in counterpoint and the symbolic use of *Leitmotiven*. Its chapters form a series of semi-detached studies rather than a logical progression; each takes up a new thread in the total pattern, a method which the author likens to exploring a mountain by many approaches, all of which together yield complete acquaintance. The book can not be placed in any familiar category, but combines philosophy, biography, historical perspective, poetry, psychology, and mystic intuition in a manner possible only to the cosmopolitan faculties of the cultivated German mind.

The content of this work can not be summarized, for its themes are too numerous and the unity which binds them haunts each one and lingers in the mind like music, but eludes formulation. Outstanding features are: a man of the North longing for, not possessing the South; a German in his inner conflicts, his self-transcendence, his striving *towards* culture, even in his hatred of things German; the last representative of the second German humanism which began with Herder and the heir of Luther, of Protestant defiance and loneliness, hovering in suspense between the past which

he destroys and a new world^a which he prophesies but can not build; the tragic expression of the inner incurableness of his century, the war between deadly enlightenment and longing for mystic religion.

To some readers the book may seem to lack unity, but perhaps that is its truth to its subject. Certain it is that the author presents the defeated side of Nietzsche, sees him more as an end than as a beginning, but that is precisely because he considers him the embodiment of insoluble conflict. A philosopher may well adopt the purpose of discovering more unity and more positive achievement in Nietzsche than Professor Bertram indicates. But this work will remain of great value even for that purpose, feeding it with its riches and leading it on with the sense of something ever beyond analysis. Indeed if this masterpiece were literal mythology it would remain a thing of beauty for its own sake, and a distinguished landmark in German literature.

It goes without saying that one should read the Bertram and also Nietzsche's letters in German if possible, but both deserve to be made accessible outside the language frontier. The reviewer has compared many passages of the translations with the originals and found them accurate. Professor Bertram's prose is peculiarly untranslatable, and M. Pitrou has probably done as well with it as could be expected in French.

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Carlyle and German Thought, 1819-1834. CHARLES FREDERICK HARROLD. (Yale Studies in English, LXXXII.) New Haven: Yale University Press. London: Humphrey Milford, Oxford University Press. 1934. xii + 346 pp. \$2.50.

A good piece of work, careful, well-documented, and readable. It covers the period during which Carlyle sought in German thought a support for his own convictions of the spiritual nature of the world, in contrast with the materialistic or skeptical trend he found in English and Scotch thought. Goethe was the great influence, though Carlyle hardly comprehended the range of Goethe's personality. Carlyle understood still less the deeper meanings of the philosophy of Kant, reading him in the light of Fichte's moralism. Even Fichte, to whom Carlyle owed the form of enunciation of many of his doctrines, was known to him chiefly through a few of the more popular works. Other German authors had their occasional influence, Novalis, Richter, Jacobi. Professor Harrold takes up the different elements that constitute Carlyle's rather cloudy philosophy, and shows the connection of each with German thought. He brings out well how this Scotch Calvinist sought in Germany confirmation

of existent opinions or feelings, rather than a totally new point of view.

H. T. C.

Reality and Illusion. A New Framework of Values. RICHARD ROTHSCHILD. New York: Harcourt, Brace & Company. 1934. 442 pp. \$3.50.

This book is more important as a symptom than as a contribution. It is an attempt, marked by a curious mixture of humility and grandiose pretentiousness, to offer a comprehensive philosophy of nature, life, and value for that abstraction repeatedly and vaguely specified in the text as "the modern man." There is considerable internal evidence that the book is the work of an amateur, sincere, widely-read, and uncritical; there are random quotations out of context and apparently quoted with no sense of relative value from Oswald Spengler and Jonathan Swift, Einstein (from a negligible popular essay), Whitehead, Millikan, J. S. Mill, and Harry Elmer Barnes. There is an elaborate but not very clear organization of the text into Esthetics, Ethics, Religion, Organics (The Arts), Politics, the Quest of Happiness, the schema seems not clearly defined except by names, and there is considerable repetition. Terms like realism, idealism, the absolute are vaguely used, and historical material lightly generalized. The author writes that "we must not be misled . . . into the path of academic scholarship." He has not been so misled.

But the book is significant and sincere. It is an attempt to "sketch out a comprehensive structure of values," which will take into account "realities" other than the measurables of physics, (the author has clearly been reading, though not too clearly, Whitehead and Eddington). He insists on understanding the individual in terms of the organism on which he depends and any existence must be understood in terms of relations and values. "Whatever a reality is, it must always represent a synthetic unity, an organization of minutiae which transcends the minutiae themselves in the same sense in which the reality of a water molecule transcends the reality of the component oxygen and hydrogen atoms" (p. 101). "We may thus speak of natural events as the creative or artistic outbursts of a universal mind intent on achieving its own internal clarification" (p. 112).

The book seems to be absolute idealism frankly moralized and estheticized. But the author might have waived scope in favor of analysis. As it is, his book will confuse the general reader for whom it is intended, and bewilder even more the professional student of

philosophy. It attempts too much and does too little and too verbosely.

I. E.

The Chinese Renaissance. HU SHIH. (The Haskell Lectures, 1933.)
Chicago: University of Chicago Press. 1934. xi + 110 pp.
\$1.50.

The attention of readers interested in the philosophical aspects of Chinese culture is called particularly to Chapter IV, "Intellectual Life, Past and Present." Here Dr. Hu Shih makes an admirable brief survey of the history of Chinese thought as a background for the present humanistic renaissance. He not only discusses the fundamental differences between Chinese and Western philosophic traditions, but outlines the circumstances that caused the predominantly ethical and political interests of classic culture to yield during the last eight hundred years to a growing scientific interest. This theme is further illuminated in Chapter V, "Religion in Chinese Life." The series of lectures as a whole should appeal to all who desire a competent account of the currents in Chinese culture today as well as of the fundamental contrasts and interrelations between Eastern and Western thought.

H. W. S.

OTHER NEW BOOKS AND JOURNALS

ERKENNTNIS. Band 4, Heft 1. Sind die mathematischen Urteile analytisch oder synthetisch? *Heinrich Behmann.* Einige grundlegende Tatsachen der Worttheorie nebst Bemerkungen über die sogenannten unvollständigen Symbole: *Aarni Penttilä* und *Uno Saarnio.* A Methodological Consideration of the Problem of Psychometrics: *J. F. Brown.*

BULLETIN DE LA SOCIÉTÉ FRANÇAISE DE PHILOSOPHIE. 33^e Année, No. 3. Les Aspects et les Enseignements de la Crise Économique Actuelle. Thèse: *Roger Picard.* Discussion: *G. Bénézé, C. Bouglé, L. Brunschvicg, A. Lalande, A. Landry, B. Lavergne, F. Pécaut, M. Winter.*

RIVISTA DI FILOSOFIA. Anno XXV, No. 2. Meister Eckhart: *P. Martinetti.* Esistono delle leggi psicologiche?: *E. Bonaventura.* La logica di C. G. Bardili: *G. Grasselli.* Il saggio del Brentano sulla origine della conoscenza etica: *C. Goretti.* S. Agostino ha letto Platone?: *G. Capone Braga.* Edizioni e Studi Cartesiani: *G. de Giuli.*

Logos. Anno XVII, Fasc. 1-2. Tempo obbietivo e tempo unico nella filosofia di H. Bergson: *D. A. Cardone.* Royce di fronte al

problema del male: *R. Fedi*. Il metodo cartesiano e la riduzione vichiana della filologia a scienza: *G. Scerbo*. Vincenzo Di Giovanni e Niccolò Tommaseo: *E. Di Carlo*. Il pensiero filosofico di Francesco Fiorentino nella storia della sua formazione: *D. Bosurgi*. Il problema della storia nell'idealismo moderno: *N. Petruzzellis*. Il concetto dell'io nell'empirismo inglese: *E. Garin*.

ANALYSIS. Vol. I, No. 4. "It all Depends upon the Purpose": *John Laird*. Right and Probable Consequences: *J. O. Wisdom*. The Genesis of Metaphysics: *A. J. Ayer*. Variables Again: *Donald Sholl*. On Instances: *E. D. Phillips*. The Origin in Experience of the Notion of a *Physical Object*: *Daniel Cory*.

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NOTES AND NEWS

The Sixth International Moral Education Congress will be held at Cracow, Poland, under the patronage of the Polish Government, September 11 to 14, 1934. Membership subscription to the Congress is 10 shillings or equivalent and should be sent to the Treasurer of the Polish Committee, Mme. Z. Zukiewiczowa, Koszykowa 9, Warsaw, Poland. Members will receive Congress papers, and copies will be posted to subscribers who can not go to Cracow. Information about the Congress may be obtained from H. L. Latham, 5527 Kenwood Avenue, Chicago, Illinois.

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THE JOURNAL OF PHILOSOPHY

THE PRESENT DILEMMA IN PHILOSOPHY

I

IDEALISM, by which I mean absolute idealism, has been moribund for the last thirty years, notwithstanding that it still claims many adherents. What has been the cause of its decline?

Certainly not the *arguments* of the realists. For the great movements of the human spirit are for the most part blind, unconscious—like the movements of some great beast stirring uneasily in the labor of heavy dreams. A deep unconscious logic, if any logic at all.

Besides, the arguments of the realists have been for the most part irrelevant. They were directed against the Berkeleyan "*esse est percipi*," and proceeded upon the monstrous delusion that to refute Berkeley was to refute absolute idealism. But the creed of absolute idealism was not Berkeleyism. Its central tenet was that everything in the universe logically implies everything else. And against that tenet the only argument of the realists that had the slightest weight was the argument against the internality of relations. But even here no realist can *prove* that the existence of my ink-pot does not imply the existence of the Mikado. All he can do is to say that he sees no such implication, and that the idealist has failed to prove his case. Obviously to show that everything implies everything else would be an infinite and therefore an impossible task. Idealism can never be more than a faith and a hope.

The life-blood of idealism was religious faith, a "spiritual view of the universe." It never rested upon logic. Its logic was a "rationalization" of its intuitions, visions, and hopes. And now that the religious faith on which it rested is gone, idealism collapses. *That*, and not realistic logic, was the cause of its decline. The spirit of unfaith, this-worldliness, realism, anti-sentimentalism, anti-romanticism, has gained the upper hand, both in literature and in philosophy. It is now the spirit of the modern age. It has to work itself out. Until it has done so, attempted revivals of idealism are so much beating of the air.

The spirit which produced the idealistic movement from Hegel to Bosanquet produced also romantic poetry from Wordsworth to W. B. Yeats. Romanticism is a kind of faith. This spirit is dead, and idealism dies with it.

This from the human point of view. Technically, the defect of idealism is, not that it commits any "fallacies," not that it has been shown to be false, but that it can not show itself to be true, because it rests upon unproved assumptions.

II

But now if we turn to realism and ask if we can find there a logically satisfying philosophy, the astonishing fact emerges that realism, like idealism, is founded upon faith, and not upon reason. Its faith, indeed, is not religious insight. It is that grossly inferior kind of faith called "common sense."

Realism asserts two propositions. The first is that external things are not "mental." To have shown this is, I think, a service to philosophy. It refuted the puzzling arguments of Berkeley. But it can not be said to be very important, since modern idealism did not maintain the position of Berkeley. The second proposition of realism is that external things exist (some of them at any rate) when no mind is aware of them. This I take to be the essence of realism. I shall call it the proposition *P*.

But this proposition *P*, which is *the* essence of realism, is not self-evident, and it can not be proved by any conceivable logic or evidence. It is a pure dogmatic assumption. It rests upon faith. That is why I say that realism has technically the same defect as idealism.

To substantiate this statement fully is not possible in the present brief article. I have discussed it at length elsewhere.¹ I can here only offer the following reflections.

First, the unprovability of *P* rests ultimately upon the Humean discovery that one particular fact can never prove another particular fact. From the existence of this table now when I am perceiving it (which is one particular fact) I can not deduce its existence at some other time when I am not perceiving it (which is another particular fact). Therefore no amount of observation of external things can ever give rise to an inference in favor of the proposition *P*.

Secondly, this is admitted either expressly or by implication by most clear-sighted realists. And for this reason they invariably fall back in the last resort upon "common sense" or "instinctive belief." *All realism ultimately rests solely upon this basis.* And this is equivalent to saying that realism rests upon unproved dogmatic assertions. Their case is that the proposition *P* is universally and instinctively believed by everyone, and that therefore it must be true.

I need not comment upon the utter weakness and irrationality of

¹ In my *Theory of Knowledge and Existence*.

such a position. It would have justified in the past a thousand beliefs now known to be false.

It may appear fantastic to doubt the proposition *P*. But it once appeared fantastic to doubt the absolute and exclusive truth of Euclidean geometry, of the geocentric hypothesis, of the propositions which Descartes doubted. Yet these doubts laid the foundation stones of non-Euclidean geometry, of modern astronomy, and of modern philosophy respectively. And the fantastic appearance of such doubts arose in all cases from "common sense."

Thus realism and idealism both suffer from the same defect. They are both founded upon dogmatic unproved assumptions. This is what I call the present dilemma in philosophy.

III

Is there any third road?

Why not treat the proposition *P* as the geometers did the twelfth "axiom" of Euclid? At first they thought it was self-evident. Finding it was not, they tried to prove it. When this was shown to be impossible, they did not appeal to "common sense" or "instinctive belief." They left that to dullards and nit-wits. They recognized, with an intellectual courage which philosophers might well imitate, that the so-called "axiom" was a proposition which was assumed not because it was true, or because there was the slightest reason for believing it, but solely because it was convenient. This left it open to them to assume other and rival axioms, and on these axioms non-Euclidean geometry was founded.

Now the position of the proposition *P* is exactly the same as the position which the Euclidean axiom held over a century ago. For *P* is not self-evident, and can not be proved to be true. The only difference is that philosophers have neither the wit nor the intellectual courage which the mathematicians exhibited in the like situation. They keep on timidly and feebly running back to the tent of common sense.

Proceeding as the mathematicians did, let us assume that the proposition *P* might be false. What rival "axioms" are possible? We shall have to assume that colors, sounds, tastes, stones, trees, stars, do not exist when they are not being perceived, that they pop in and out of existence as minds become aware of them. Not, mark you, that they are "mental." You can have them as non-mental as you like. But these non-mental things will come and go according as we are conscious or unconscious of them.

Now if so, why does everyone universally assume the truth of *P*? This belief must have some cause. It has not been produced in our minds by *reason*, because there is no logical reason for it. Hence

the cause of our holding this belief must be *psychological*. What psychological cause for it can be suggested? The answer seems quite plain. Belief in *P* affords a vast simplification of our universe. It makes for economy of thought. It means less intellectual labor. It is based, if you like, upon our mental laziness.

Which is the simpler belief? That there exist multitudes of successive universes, which come into existence and go out of existence with blank intervals of non-existence separating them? Or that there exists only one continuous universe? That there are innumerable tables at different times in my room? Or that there is one table there all the time? The innumerable universes, the innumerable tables, are an unnecessary complication. Therefore the mind has cut them out, and thinks in the simpler terms of the one table and the one universe. Therefore, for the sake of convenience only, it has adopted the proposition *P*.

Is not this a more rational explanation than that of the realist? We all in practice believe in *P*. Why? The realist can find no foundation for it but his miserable "common sense." He thus bases it upon a sort of irrational revelation, which has not even the emotional attraction of mysticism. Asked to account for it, he throws up his hands in despair and appeals blindly to instinct. How this "instinctive belief" arose he can not explain, and he fails to see that it even needs explanation, much less that it *can* be explained quite simply. For the account of the matter given in this article is the explanation of the realist's mysterious "common sense."

We need not dispute that there is some truth in the realist account of the matter. There is such a thing as common sense. There may even be such things as instinctive beliefs. I doubt whether they can properly be referred to "instinct" in any psychologically precise sense. For the instincts are, I understand, urges to *action*, not urges to believe propositions. And I do not think there can be any instincts of a purely intellectual or theoretical character, which have as their function to guide men into the holding of true (or untrue?) beliefs. But if the realists simply mean by instinctive beliefs those which we hold as a matter of course, without explicit reflection, then, of course, there are many such. That the sun revolves round the earth must have been an instinctive belief for most of man's history. And the fact that we now know it to be false should surely lead us to doubt the absolute infallibility of instinctive belief as such.

But in any case even if we admit that belief in the proposition *P* is in this sense instinctive, is it not obvious that we can not rest there? For instinctive beliefs themselves must have some cause. Much of our "knowledge" may be founded upon them, but that is not a sufficient and final account of our knowledge. For these instinctive

beliefs are themselves a problem to be explained. We must clearly push our enquiries further back. When we do so we may find that we have included under the one head of instinctive beliefs many different kinds of propositions, belief in which is due to many different psychological causes. Some may be due to erroneous, more or less unconscious, inferences from perception. The belief that the sun revolves round the earth may be of this kind. Others—and I think the proposition *P* would come here—are not founded on either perception or on any kind of inference, but upon considerations of convenience, simplicity, and so forth.

Realism fails to give, nay more, refuses to even try to give, any account whatever of its ultimate principles. It keeps on saying "We believe them because common sense dictates them. We believe them because everyone believes them and always has believed them. We believe them because we believe them." Pressed further it refers vaguely and quite unscientifically to "instincts," without attempting to give any account of what instincts are or why they have arisen. Thus in the last resort they base their philosophical principles upon some mysterious revelation, into the nature of which, being, it must be presumed, a divine mystery, they steadfastly refuse to look.

In contrast with this the account we would give of the origin of belief in the proposition *P* is simple, straightforward, and, I think, in essence scientific. It came to be believed, not because there is any logical reason for thinking it is true, but because it was found to simplify the world in which man found himself. It must have evolved slowly and laboriously among our remote human or even prehuman ancestors. There is no reason to think that the amoeba, the crocodile, the dog, or even the anthropoid ape believe it. Does even the human baby believe it? "A baby's rattle," says James, "Drops out of his hand, but the baby looks not for it. It has 'gone out' for him as a candle-flame goes out; and it comes back when you replace it in his hand. The idea of its being a 'thing,' whose permanent existence by itself he might interpolate between its successive apparitions has evidently not occurred to him."² If the idea evolved in the human species, if it even has to grow up in the individual infant, there must be some cause for this evolution. And if the cause does not lie in the logical reason of man, or in his perception—as it evidently does not,—may it not lie in some such considerations as I have suggested? My suggestion at least seems better than the realist's blind irrational refusal to give any account of it at all.

² James, *Pragmatism*, p. 174.

IV

That things continue to exist during interperceptual intervals I have called the proposition *P*. That they do *not* exist during such intervals I will call the proposition not-*P*. I have compared the situation as between the two rival "axioms" *P* and not-*P*, to the situation as between the rival "axioms" of Euclidean and non-Euclidean geometries respectively. But in one important respect the two situations differ. In geometry the various axioms all stand on exactly the same level. There is no good ground for preferring one to the other. As regards the axioms *P* and not-*P* this is not so. There is actually good ground for preferring the axiom not-*P* to *P*.

I will not stay to discuss the possible objection that the statement above made about geometry is not true since empirical evidence, such as that which is believed to have verified Einstein's hypothesis, may definitely go in favor of one geometry as against the others. I will only say as regards this that in my view the empirical evidence referred to does not prove one geometry truer than another, but only that one is more convenient in certain particular cases than the others. And leaving this matter aside I will proceed to show—what is the important point for us here—that the proposition not-*P* is philosophically preferable to the proposition *P*.

How can this be? It is admitted that there is no evidence either for *P* or for not-*P*. No inference from the existence of this table now when it is being perceived can ever prove, or make it even faintly probable, either that it did exist a minute ago when it was not being perceived, or that it did not. We can not *know* whether *P* or not-*P* is true. There is not the slightest reason or evidence in favor of either. Both are pure assumptions. How, then, can one be preferable to the other?

The answer is that the burden of proof is on those who assert *P* and not on those who assert not-*P*. And as neither can discharge this burden, the case goes to the assertors of not-*P*. Let us see how this is.

You assert that the table exists when no one is perceiving it. Then it is for you to prove that. It is not for me to prove that it is *not* true. I am logically entitled to decline to accept or believe it till you give some demonstration of it. It is just as if you should assert that there is a mountain forty thousand feet high on the hidden side of the moon. There may be. I can not prove that there is not. But there is no reason why I should attempt such a proof. It is for you to bring forward evidence that there is such a mountain. Until you do so, I am entitled to say that I see no reason for believing it to be true, and that in the absence of any evidence I must hold the

opinion that there is probably no such mountain. So it is with the table when no one is perceiving it.

The position then is this. Philosophically and logically not-*P* is preferable to *P*. But *in practice* *P* is preferable to not-*P*. For it is more convenient and simple to believe *P* than not-*P*. That is why *P* is universally believed, and it is quite right that it should be so believed. But we here, as philosophers, as theorists, are not concerned with that. For us not-*P* has to be preferred. We can not say certainly that *P* is false. It may be true. But since the burden of proof is on those who assert that *P* is true, and since they can not bring even an iota of evidence to prove it, we can not accept it. It is better for us to believe in not-*P*.

V

Philosophically, then, we have to believe that colors, sounds, trees, stars, mountains—non-mental though they may be—do not exist except when they are being perceived either by us or by some other minds. We have to believe that they jump in and out of existence like Jacks-in-the-box. We came to hold the opposite view, the “common sense” view, because it is simpler and more convenient. But it is not actually and literally true.

But this, it will be said, leads to an absurd universe. Well, I for one should not be surprised if the universe, as it actually is, is absurd. For “absurd” here does not mean irrational, illogical, or contrary to the evidence. It only means strange, unfamiliar, different from our usual ideas. It only means, in fact, different from what “common sense” would expect. But that, I think, is nothing against it. My absurd universe is no more strange and unfamiliar than the universe of non-Euclidean geometry, than the universe of Einstein, than the universe of electrons and protons. Science has long ago given up worshipping at the shrine of common sense, which is merely another name for ancient prejudice. Realistic philosophy alone, in this year of grace, seems to think that blind prejudice is a good and proper foundation for its ultimate principles.

But causality. Is not that a bar to our philosophy? We have to believe in a continuous series of cause and effects. What happens to this if the world goes in and out of existence in this absurd fashion? We see a series of causes continuing up to a certain point. Then there is a blank when no one is perceiving the series. After the blank comes another period of perception when the series appears to go on as if it had continued in the interval? Does not this prove that it really did so continue? And in any case can we believe that the table suddenly springs into existence uncaused?

Well, I can only say that causality is not sacrosanct. Our belief

in its operation, like all other beliefs in philosophy, should depend on the evidence. There is no evidence for its operations during interperceptual intervals. There obviously can be none. And therefore there can be no reason to believe in it. To do so is, of course, *convenient*. That is why we believe it. It is in exactly the same case as the proposition *P*. It is, in fact, *part* of that proposition. *P* includes the belief that things go on existing in interperceptual intervals in the usual way, and of course that the usual processes, causal and other, go on in them at the same time. Causality, therefore, can not be used to prove the proposition *P*, for the assertion of causality is itself a part of that proposition. Any such argument would be circular.

The position of the law of causality is almost exactly paralleled by that of the law of the conservation of energy. It is only by means of the fiction of "potential" energy that it is possible to hold that the same amount of energy is always in existence. All that the *evidence* shows, all that is empirically verifiable, is that where there is a certain quantity of energy which suddenly disappears out of existence at a certain time, the same amount of energy will reappear in the universe at some later time. The gap between the two existences of the energy is filled up by the fictitious supposition that it goes on existing "potentially." This supposition is convenient and leads to no undesirable results, but can not be held to be ontologically true. Hence the actual truth about the law of the conservation of energy is that it is true when energy is actually being exerted, but not during the intervals between exertions. The inter-exertional gaps here correspond to the interperceptual gaps in the law of causation. We can truly hold that causation operates in the usual way during perceptual periods, but that is all the evidence warrants. That it goes on operating during interperceptual periods is a convenient belief which we all hold because it is convenient. It is nothing more. And certainly, therefore, the proposition *P* can not be deduced from it, or proved by it.

All that the hostile reader can now do is to say "this is such fantastic nonsense that I flatly decline to believe it." And from this mood, if he persists in it, I can not wean him. I can only point out that for *practical* purposes he is no doubt right, and that I am not asking him to forego his practical habits and beliefs; but that if he is going to insist upon intruding into theoretical philosophy beliefs which have no rational, evidentiary, or scientific foundation, no foundation in fact except practical convenience, then I think he has not yet attained to that pure dispassionate spirit of reasoned enquiry, which is the rule in science, and which ought to be the rule in philosophy.

PRINCETON UNIVERSITY.

W. T. STACE.

THE REALISM OF COMMON SENSE¹

FOR a long time I pondered over the best way to begin an essay on the realism of common sense. Since the appearance of Santayana's *Scepticism and Animal Faith*, nearly ten years ago, I have been convinced that the sceptical approach to knowledge has received its final formulation. There was no use in going over this perfectly tilled ground again; it was for me no longer arable. I believe it is true, however, that the process of doubting is one which, as Descartes says, we have to go through "once in our life." But this hardly implies that it is necessary for every budding philosopher to write an initial treatise on the correct method of scepticism. I realize that the *logic* of a "solipsism of the present moment," as enunciated by Santayana, has been questioned in various quarters: and the usual stricture is that *essences* are abstractions from simple propositions entertained by even the doubter himself, and therefore highly artificial. I will only remark in passing that it seems to me that the English philosophic mentality is inclined to be too *verbal*, and betrays an inveterate impotence to get behind the superficial network of *statements* to a level of pure intuition or feeling. Most of us are incapable, probably, of any sustained depth of contemplation. For better or worse, then, I accept solipsism as the logical outcome of any mentalistic type of philosophy that is honestly carried out. As a critic of the malicious tendencies in the history of philosophy, I consider that Santayana is quite incomparable.

The other objection to an initial scepticism of such a relentless order is somewhat more difficult to express. Even if the logic of solipsism is admitted to be flawless, it is felt that the *morale* of a subsequent system of philosophy is weakened. After a philosopher has almost committed intellectual suicide at the outset, it is a lonely task to work slowly uphill into the lost air of an "animal faith." He never seems quite to recover from the shock of solipsism: a taint of suspicion hangs about his most sanguine later assumptions. On the other hand, however, we all know that dogmatism and unanalyzed presuppositions are bad traits in any system of philosophy; and the thorough scepticism of Santayana has surely had a wonderful cathartic effect on the egoism of modern thought. An initial mortification of even the most instinctive claims to knowledge should not stultify a courageous thinker, but purify the recognized necessity of his future assertions. He will then be dogmatic with a difference.

I avoided the method of scepticism, then, not so much because it is alien to my way of thinking, as because I felt that Santayana had

¹ Being the *Introduction* to a forthcoming *Primèr of Epistemology for the Laity*.

carried it to its logical conclusion; and besides that, the aim and scope of a simple primer of the realism of common sense hardly calls for an *ascêsis*, as Pater might put it, of the great historical pretensions of the intellect. My desire was merely to clarify the outlook of common sense: and I felt that a correct theory of knowledge was the only gateway to a final insight into so many hotly contested issues, be they of art, science, or religion.

If the question arises, for instance, as to whether a certain work of art is to be considered as "classic" or "romantic" in treatment, how can we offer a definite judgment on such a matter unless we have settled, once and for all, just what is the *objective contribution* to our perceptual experience, as distinguished from those elements of memory and sentiment—the *mind's contribution* to the total field of experience? What if the seemingly objective features of perception are, as a matter of fact, saturated as well in the vagaries of a human point of view? It is all very well to be exhorted from time to time by some reforming critic "to see the object as in itself it really is," but did Matthew Arnold, or does Mr. T. S. Eliot, for example, really know what the *true* object of perception is? If so, I might have been spared much labor.

On the other hand, a little epistemology is a dangerous thing. This is only too painfully obvious in the popular writings of such otherwise eminent specialists as Sir Arthur Eddington and Sir James Jeans. As soon as they discover (after a smattering of physiology and epistemology they have probably imbibed from Lord Russell) how extremely indirect and symbolic our knowledge of the external world must be, they almost drop that world out of sight in their bewilderment; and then, getting alarmed, postulate some new-fangled mathematical Deity: or growing still hotter, "go mystic in a big way," as an American might express it. After a great many years spent in studying the internal constitution of the stars, they suddenly imagine that these same stars are in their heads—or if not exactly stars, "pointer-readings." But why should Eddington or Jeans have the perfect and transparent perceptual knowledge of some omniscient Mind, like the God of Aristotle? Their whole confusion rests upon a false ideal of what *knowing* is; or, in other words, they have no epistemology. The danger of dabbling in a severe intellectual discipline like epistemology is often apparent in the adherents of such fads as Christian Science and Spiritualism. They point out triumphantly how little we really know about the so-called *physical* (dreadful word!) universe, as if that was a good excuse for believing in anything we *like* to believe in. On the contrary, however, one should be less confident of tracing accurately the antics of a spook, after discovering how extremely

symbolic is our perception of such a common object as a chair, which can be certified by everybody.

I can not remember exactly what it was that first prompted me to question the homely outlook of the realism of common sense, but I am certain it was not a bent stick seen in the water, a pink rat, or any other of the favorite examples that we find in the textbooks on epistemology. It was most likely a little knowledge of science that originally made me suspect the nature and extent of our primary crude experience of the hang of things. For even a cursory and superficial survey of the reports of science should be sufficient to convince anyone that the *naïveté* of our ordinary perceptual life covers a multitude of latent but throbbing events. It is wonderful to first discover in physics that beneath and beyond the intimate world of immediate experience lies an alien world of perhaps infinite and unfathomable complexity. But if we turn to physiology for further enlightenment, our wonder and perplexity is only increased. For if the experiments of this latter science are trustworthy, and I see no reason why common sense should begin by assuming the contrary, the indubitable physical basis, or ground, of all our variegated perceptual life is the human brain. At first blush, this may not appear as such a startling statement; but gradually the roots of a very great and difficult problem begin to grow in our minds. I open my eyes in the morning and believe I see the external surface qualities of a world of things beyond my body. But if all these obvious qualities are rooted in that region of physical space that confines a brain, in what conceivable sense, or in what possible fashion, can I really perceive and *know* an external universe? As an inquisitive adult, then, I must get to the bottom of this common illusion. And it is the proper task of epistemology, or the *criticism of the cognitive presumptions of common sense*, to amend and clarify an unsophisticated or instinctive realism.

For the task of epistemology, as I understand it, is not the same as that of science. Science does not start by questioning the *validity* of sense-perception, memory, testimony, and instinctive induction: but seeks to enlarge, by the use of powerful instruments, and a body of statistics, the simple outlook of common sense. It may dispel many a poetical illusion about the world, and help to exhibit the necessity of epistemology, but it is in nowise a violation of the creed of realism: unless it becomes hopelessly subjective, and loses hold of the very world it proposes to understand. From the angle of epistemological criticism, I find science rather akin to common sense in its fundamental attitude towards nature. It is a wonderful *amplification* of our primary knowledge of things, but not a final *ratification* of our most deep-rooted convictions. And why

should it be? Unless the professor of physiology can honestly point to some sorry skull on his table, and trust his memory or the faltering answers of his pupils, of what possible significance is his lecture, so crammed with a detailed knowledge of secret but real things?

I have said that the criticism of the cognitive presumptions of common sense is the proper task of epistemology. It may be objected, however, that to speak of *presumptions* in connection with common sense is apt to be misleading: it is to read into the simplicity of our instinctive realism a sophistication, or critical conscientiousness, that is not to be found in practice. I confess that it is only in the light of epistemological criticism one may detect the nature of these various presumptions, or cognitive claims: they are *automatic assertions* involved in living under the fire of our environment, and are not formulated in what I call "ordinary perception." But in analysing the realism of common sense, we become aware of its uncritical complexion and vital presuppositions. It is a daily fact, for example, that in ordinary perception I *presume automatically* that I intuit the external surface qualities of physical objects: but if the reports of physics and physiology are not to be completely ignored, this is obviously a kind of practical illusion on my part. Again, if I turn on the hot-water tap in my bathroom, I seldom stop to wonder if the water will be really hot; or, worse yet, if it will flow at all. In this most elementary case of instinctive induction, however, a less critical person than myself may detect the possibility of a kind of latent cognitive *presumption*: the water in an hotel is not always hot, and it has been known not to run sometimes. So in most cases of memory or anticipation, I do not initially question the validity of what I remember or expect to happen: there is a spontaneous or instinctive claim to know some object in the past or future. But the experience of living proves that memory and anticipation are notoriously fallible.

From the standpoint of an unformulated and naïve realism, then, the *validity* of our perception of things, of memory, of certain kinds of testimony, and instinctive induction, are simply assumed. But, as a matter of fact, none of these four popular topics of epistemology have more than this humble *physiological sanction*: they have no backing of a more absolute or infallible nature. It is our duty, however, in epistemology, to exhibit and confirm (at least, *pragmatically*) the living necessity for the cognitive presumptions of common sense. They would never have arisen and perplexed the minds of philosophers, save for the natural exigences of life itself. But a scrupulous critic of knowledge, with an eye to a certain weakness of the senses, and the poetical simplicity of common sense, may legitimately hold that every instance of sense-per-

ception, memory, testimony, and induction, is a kind of latent presumption—an unconscious *taking for granted* of some bit of knowledge about the world. And a thorough discipline in scepticism will only reinforce and purify his more substantial reasons for holding with Santayana that all knowledge is, to a disenchanted and candid spirit, a matter of “animal faith.”

But the persistent because instinctive presumption to know the things of this world, and the ways they hang together, will remain the backbone of the realism of common sense. Its fundamental outlook is healthy, practical, and roughly reliable; but under the searchlight of epistemology, impossibly naïve. Common sense, then, for a critic of knowledge, has a strong side and a weak side, is partly correct and partly misleading. The confident stubborn claim of the healthy mind to *know* this world can not be avoided or denied in the long run; it may be suspended by doubt, or error, or the pathetic brevity of an individual intellect; it can certainly be instructed and formulated by science and epistemology: but its masculine vitality will remain triumphant when the dust of our last analysis has blown away.

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DANIEL CORY.

SOME RECENT GERMAN CRITICS OF PHENOMENOLOGY ¹

ENGLISH criticism of Husserl and the phenomenological movement has been very slow to appear, but German philosophers have shown no such reticence. Almost from the very start of his philosophical career Husserl has had to contend with criticism in one form or another. He has had occasion to complain at times that his opponents have misunderstood his position. He regretted, for instance, that a man of Külpe's ability should fail to understand his doctrine of categorial intuition: and yet his career can largely be

¹ *Der phänomenologische Idealismus Husserls*. T. CELMS. (Latvijas Universitātes raksti. Acta Universitatis Latviensis, v. 19.) Riga: Walters und Rapa. 1928. Pp. 251-442.

Husserls Phänomenologie und Schuppes Logik; ein Beitrag zur Kritik des intuitionistischen Ontologismus in der Immanenzidee. R. ZOCHER. München: E. Reinhardt. 1932. Pp. 280.

Von Husserl zu Heidegger; Kritik der phänomenologischen Philosophie. J. KRAFT. Leipzig: H. Buske. 1932. Pp. 124.

Husserls vor-phänomenologische Philosophie; mit einer monographischen Bibliographie Edmund Husserl. W. ILLEMANN. (Studien und Bibliographien zur Gegenwartsphilosophie.) Leipzig: S. Hirzel. 1932. Pp. viii + 87.

Kritik der Transzendental-Phänomenologie Husserls; erster Teil einer Kritik der Gegenwartsphilosophie; mit einem Nachtrag zur monographischen Bibliographie Edmund Husserl. F. WEIDAUER. (Studien und Bibliographien zur Gegenwartsphilosophie.) Leipzig: S. Hirzel. 1933. Pp. xx + 132.

told in terms of the controversies which have engaged him at one time and another.

In 1891 Husserl published in the *Göttingische Gelehrte Anzeigen* a review of the first volume of Schröder's *Lectures on the Algebra of Logic*. While praising Schröder's work as the first significant German contribution to symbolic logic, Husserl made his review the occasion for arguing at length that symbolic logic is not logic at all, but only a calculus. Following Brentano he claimed that natural language is as good as indispensable for judging; logic is concerned with the meaning of propositions which are judgments expressed in words. If symbolic logic claims to be able to work without using such meanings, it differs fundamentally from logic, which is totally unable to function without using meanings. The error of men like Schröder, Husserl argued, lay in the fact that they failed to recognize the essential difference between language and algorithm, and hence they did not realize that they had produced no logic at all, but only a calculus serving special logical ends.

Such an attack on Schröder's work did not long go unanswered. Andreas Voigt, who had shortly before been a student of Schröder's, came to the defense of his former teacher and a controversy ensued between Voigt and Husserl in the *Vierteljahrsschrift für wissenschaftliche Philosophie*, a controversy that Avenarius the editor had to end. Later Schröder himself took cognizance of Husserl's views and answered them very briefly and effectively.

The most serious development for Husserl, however, was that in 1894 Gottlob Frege, whose work in symbolic logic had been largely overlooked, made a highly successful counter-attack on Husserl. He reviewed Husserl's book, *Philosophy of Arithmetic*, the first volume of which had appeared in 1891, and criticized its arguments so searchingly and decisively that almost nothing was left apparently for Husserl to utilize of his early views. "In reading this book," Frege said,² "I have been able to measure the extent of the damage which the inroads of psychology on logic have caused and I have here held it to be my duty to bring the damage justly to the light. The errors which I have felt it was necessary to indicate should be charged less to the author than to a widespread philosophical sickness."

Husserl did not answer Frege's attack as he had answered Voigt's. It was to his credit that he saw the truth behind Frege's criticism. He had to admit to himself that he had been solving logical problems with the aid of psychology, just as many another German logician of the day had done. He resolved to study the whole situation exceedingly carefully. This study resulted in the

² *Zeitschrift für Philosophie*, 103: 332, 1894.

publication in 1900 of the first volume of *Logical Investigations*, which he called the *Prolegomena to a Pure Logic*. This *Prolegomena* was an attack, classical in form and effect, on all those who held as he himself had once done that psychology can subserve logical ends, who were guilty, in other words, of the error of psychologism. The second volume of *Logical Investigations* followed in 1901, giving Husserl's reconstructed thought. It contained keen analyses of the theory of meaning, a new theory of universals, a highly significant theory of categorial intuition claiming to be what Kant had failed to realize as intellectual intuition, and the first foreshadowings of what he was pleased to call phenomenology.

Outward success came to him in 1901 when he was invited to a chair of philosophy at the University of Göttingen. The years that followed his acceptance of that position were given over to developing the phenomenology hinted at so often yet never attained in *Logical Investigations*. They were also years in which incessant attacks were made on his work, though of course many bestowed the highest praise on it and some, such as Scheler and Lipps, were converted by it. In 1902 the first detailed attack was made when Palágyi published a book called *The Conflict of the Psychologizers and the Formalists in Modern Logic*. Husserl published a reply to Palágyi, but he did not reply to the other critics who followed. The next important attack was *Critical Idealism and Pure Logic, a Cry in the Conflict* by Wilhelm Jerusalem in 1905. Again in 1909 Maticevic reviewed the whole situation in a book entitled *On the Foundation of Logic, a Contribution to the Determination of the Relation between Logic and Psychology*.

The main contention of Husserl's critics was that his phenomenology was in reality nothing more than psychology. After August Messer made a similar point in two articles on *Husserl's Phenomenology in its Relation to Psychology*, published in the *Archiv für die gesamte Psychologie* in 1912 and 1914, Husserl decided to carry the war into the enemy's camp by speaking before the Sixth Congress for Experimental Psychology. He asserted vigorously that phenomenology is not descriptive psychology, as his critics would have, and that further it contains nothing at all of psychology. On the other hand, it does find application to psychology, providing its theoretic foundation and in fact making an exact psychology possible.

However courageous that step was, Husserl failed to convince the psychologists, partly because his words sounded like an ultimatum to them and partly because he expressed himself in the terminology of *Ideas towards a Pure Phenomenology* which had been published in 1913. Now the terminology of that work is singularly

difficult and it seems to have had the effect of checking the tide of criticism by giving the critics a particularly hard piece of work to assimilate before they could go forward with their attacks. Consequently a lull came, during which Husserl's fame continued to grow and he was able still further to work at developing his system.

In 1928 Husserl retired from academic work, a successful man and widely regarded. Between 1914 and 1928 a few critical works appeared, such as Ehrlich's *Kant and Husserl*, but most of the material published during that period was of an expository nature. About 1928, however, Husserl's critics began to feel more sure of their understanding of his work and a fresh series of attacks was launched. To none of these did Husserl reply, although it must have distressed him to see so many of the old arguments cropping up again.³

Celms in his *The Phenomenological Idealism of Husserl* has given one of the best analyses of phenomenology that has yet been published. It is based on notes of Husserl's lectures as well as on his principal works, though its main interest is in the *Ideas towards a Pure Phenomenology*. The aim of the exposition is to show that it is necessary to differentiate between the fruitful phenomenological method and the untenable phenomenological idealism. The method in no way leads necessarily to such idealism and gives only a certain degree of probability, which is far from the absolutely strict certainty that Husserl claims. Husserl's idealism can best be regarded, not as transcendental science, but as a new variety of spiritual metaphysics.

Zocher drove another wedge into phenomenology in his book on *Husserl's Phenomenology and Schuppe's Logic*. The first part of his work is an analysis of the immanence philosophy of Wilhelm Schuppe; the second part is an analysis of the phenomenological philosophy of Husserl in the light of Schuppe's doctrines. He finds that the two men define a theory of immanence that is well grounded, but the moment Husserl passes over from pure consciousness or immanence to the doctrine of the noema or the object he is passing from the well-grounded to the not-grounded. The noema, the object, is transcendent, not immanent and consequently requires a

³ For many years Husserl did not reply to his critics because he thought that they had failed to grasp the fundamental meaning of his phenomenology and because he thought that a number of them were beginners in philosophy who lacked the maturity necessary for serious criticism. When however responsible critics arose in the various philosophical schools, he decided to prepare a younger man who could reply for him. After five years of daily contact with Husserl this assistant, Eugen Fink, has recently published in *Kant-Studien* a defense of Husserl against the critics belonging to Rickert's school. (Cf. *Kant-Studien*, Bd. XXXVIII, 3/4.)

different sort of grounding which Husserl has not provided. For such reasons Zocher is inclined to regard phenomenology as "a psychology of a special kind" (p. 101), a "higher psychologism" (p. 103), or an "eidetic psychologism" (p. 186).

Kraft in his book, *From Husserl to Heidegger*, also believes that the philosopher is confronted with the important systematic problem of separating out the tenable from the untenable in phenomenology. He believes that phenomenology has shaped the philosophical aspect of the twentieth century to this date, but that many fundamental questions remain to be clarified in its field. He realizes that Husserl has developed a method, not a system. That method he analyzes and says that the student will be able to follow it best by making a chronological study of Husserl's works. He regards Husserl's criticism of psychologism as purchased at the expense of a psychological mysticism and he treats Husserl's theory of universals as a metaphysical fiction. He passes on from Husserl to examine the work of two other members of the phenomenological school, Scheler and Heidegger.

Illema followed out Kraft's idea of a chronological study of Husserl's works in his pamphlet *Husserl's Prephenomenological Philosophy*. He says that it is impossible to evaluate *Ideas towards a Pure Phenomenology* as well as Husserl's later works without first having knowledge of the philosophy that Husserl held earlier. Accordingly he begins with an analysis of Husserl's first major work, *Philosophy of Arithmetic*. This analysis is well done, although it does not betray any knowledge of Frege's review of the book. Illema next devotes a chapter to what he calls Husserl's genetic-psychological interim period, 1891-1900. This is utterly inadequate in its subject-matter. Instead of showing how Husserl was forced to turn away from psychologism, he overlooks the controversies of the period entirely, and in the space of three short pages disposes of the most critical period in Husserl's whole life. Illema is perfectly right in maintaining that in order to understand *Ideas towards a Pure Phenomenology* it is necessary to know what went before in Husserl's thought. It may be added that any right understanding of *Logical Investigations* is dependent on an understanding of the events that led up to its writing. If those events are clearly understood, the misconceptions that have persisted about the book will no longer be possible.

After this inadequate survey of the philosophy that Husserl held before he developed phenomenology, Illema proceeds to a critical exposition of phenomenology. Here he develops the old argument that Husserl has produced another or better sort of psychology. He adds an appendix containing some differences between the first and

the later editions of *Logical Investigations*. A bibliography, listing nineteen works by Husserl and seventy-two about him and phenomenology, is really the most useful part of the work, although there too the omissions are noticeable. Some of the omissions were noted in Weidauer's book, *Criticism of Husserl's Transcendental Phenomenology*. He adds one work by Husserl and thirty-three about him and phenomenology.

Weidauer confines his interest to one of Husserl's latest works, *Cartesian Meditations*, which appeared in French in 1931 and of which a revised German edition is expected in the near future, to be followed by an English translation. Weidauer first analyzes *Cartesian Meditations* and then in a series of propositions makes an attack on its theoretical basis. He too holds that Husserl has failed to validate the noema and hence it must be said that transcendental phenomenology is not a philosophical discipline. He is also of the opinion that the cardinal error that Husserl made is his thesis of ideal being. Weidauer develops this criticism of Husserl in relation to a belief that he himself holds, that philosophy is, properly speaking, a normative ethics.

Whatever their opposition to phenomenology be, these critics one and all speak of the importance and the spread of phenomenology in Germany. Weidauer thinks that all philosophers must make phenomenology a common point of attack because of its great influence, its historical connections, and its real merits. It will be highly interesting to find the reactions of philosophers in English-speaking countries when they too begin to discuss Husserl and phenomenology in the critical way which has been followed in Germany.

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BOOK REVIEWS

Aristotle. Fundamentals of the History of his Development.
WERNER JAEGER. Translated by Richard Robinson. Oxford:
Clarendon Press. New York: Oxford University Press. 1934.
410 pp. \$6.00.

Shortly after the original German edition of this book was published in 1923, Professor A. E. Taylor, in a Critical Notice in *Mind* (Vol. XXXIII, p. 192), described it as a work of first-rate importance, which would have to be studied by anyone who professed a serious interest in Greek Philosophy. Professor Taylor's estimate has been justified, and it is not too much to say that the book has already succeeded in altering our general view of Aristotle. But it would certainly be well for all who read the book to take the addi-

tional pains of carefully pondering Professor Taylor's review of it, as a corrective against a too uncritical acceptance of the author's fundamental attitude toward Aristotle.

Fortunately, Professor Jaeger's own style was not infected with any of the qualities which make Aristotle's extant works seem on the whole so forbidding; it was, on the contrary, readable and interesting. Still it is undeniable that an English translation, besides being a great convenience to those who read German, will in fact have the effect of bringing the work within a much wider circle of scholars. Fortunately also, Mr. Robinson's rendering has been perfected to such a point that it reads like an original English piece, and the accuracy has been checked in part by Dr. Fritz Kölln. Furthermore Professor Jaeger himself has been consulted in doubtful cases, and has made some alterations and additions to the original edition.

The net result of Professor Jaeger's researches is this. By a carefully constructive interpretation of the fragments of Aristotle's literary works, together with a discriminating analysis of the treatises, an order of composition emerges which suggests an intellectual development through three successive phases: (1) an early Platonic stage, during the twenty years of his membership in the Academy, in which he was under the influence of Plato's personality without a slavish subjection to his master's views; (2) a transitional stage of about twelve years in Asia Minor and Macedonia, in which Aristotle, while still considering himself a Platonist, yet abandoned the Theory of Ideas and developed his own theological ethics and metaphysics; (3) the final period, commencing with his return to Athens, in which the ideal of scientific research led him in the direction of empiricism.

R. S.

Selections from Early Greek Philosophy. MILTON C. NAHM. New York: F. S. Crofts & Co. 1934. vii + 219 pp. \$1.25.

The purpose of the author "has been to make available in compact and usable form translations of the source-material of this period from Thales through the Atomists" (p. vi).—The Introduction is a reprint of the first chapter of Gomperz' *Greek Thinkers*, which gives a geographical and anthropological setting. Then follow sections on the philosophers, arranged by schools and tendencies, roughly in historical order, each section consisting of a short, clear, unpretentious appreciation and then the fragments and selections from the doxographical tradition. The translations are from Fairbanks' *The First Philosophers of Greece*, with the exception of Democritus, whose fragments have been done by Dr. Gordon

H. Clark of the University of Pennsylvania. The book should prove useful in courses on the history of philosophy.

R. S.

Da Guglielmo d'Auvergne a San Tomaso d'Aquino. Vol. II, L'Origine delle Cose da Dio in Guglielmo d'Auvergne. AMATO MASNOVO. (Publ. della Univ. Catt. del Sacro Cuore, Scienze Filosofiche, Vol. XXII.) Milan: Società Editrice "Vita e Pensiero." 1934. vii + 203 pp. 15 lire.

Notwithstanding the frequent encomia of the philosophy of the thirteenth century, and notwithstanding the unity and synthesis which are so frequently found as the characteristic marks of that philosophy, it is a striking fact that almost nothing has been written, and therefore nothing is generally known, of the philosophy or the writers of the first fifty years of that century. The publication of the philosophical works of Robert Grosseteste and of the *Summa* of Alexander of Hales, now in progress, has started a flood of critical literature which has already changed that situation in the case of one of the great figures of the period. Professor Masново's work is an attempt to trace the backgrounds of the philosophic activities of the second half of the century in terms of the labors of William of Auvergne, bishop of Paris, another of the predecessors at the University of Paris of St. Thomas Aquinas and St. Bonaventura. Volume I of Professor Masново's study, which appeared in 1930, took up William of Auvergne's doctrine of the "ascent toward God": beginning with the controversies at the University of Paris from 1229 to 1231 Professor Masново relates the discussions of the *De trinitate* of William of Auvergne to ontologism, exaggerated realism, and the doctrine of innate ideas as they had come down in the writings of Anselm, Abailard, and the commentaries of Boethius, to the time when John of Damascus was translated from the Greek and when numerous other translations from Greek, Arabic, and Hebrew philosophers (it is generally held that William of Auvergne introduced the two Jewish philosophers, Avicbron and Maimonides, into the discussions of Latin philosophy) began to disturb the philosophic equilibrium of the West. Professor Masново proceeds in Volume II to the consideration of the origin of things from God. This subject carries him into a series of controversies which were still agitated in the last half of the century, principally the "old problem" of the eternity of matter, in which the possibility of a creation from a preëxistent matter coëternal with God was envisaged and rejected (William of Auvergne and Alexander of Hales seem to have inherited this problem from Avicbron and Avicenna) and the "new problem" of the distinction of God's will and power

(William seems to have derived this problem from the polemics following on Peter Abailard's doctrine of the necessity of creation). Professor Masnovo represents William of Auvergne working upon these questions and giving a resolution to them which forms a foundation from which Albertus Magnus, Thomas Aquinas, and the other philosophers of their generation at Paris would doubtless have begun. In particular, since William opposed the doctrine of creation *ab aeterno* expressed by Avicenna, and since Aquinas was later to hold there is no rational refutation of that doctrine, the analysis of William of Auvergne is of crucial importance in understanding the philosophy of Thomas Aquinas himself, especially if the favorite scholarly problem of the moment, whether or not Thomas "avicenizes," is to be solved. Professor Masnovo plans a third volume in which he will examine William's doctrine of things, particularly of man, in the light of the discussions of his predecessors and contemporaries. The three volumes will then be used as introduction to an exposition in detail of the thought of Thomas Aquinas. The enterprise deserves the highest commendation, not only for the originality involved in the simple process of going to the little known movements which preceded the work of St. Thomas for the elucidation of that work, but for the comprehensiveness and the clarity with which the project has thus far been executed.

R. McK.

Der Verstandene Tod. Eine Untersuchung zu Martin Heideggers Existenzial-Ontologie. Mit einer Monographischen Bibliographie Martin Heidegger. ADOLPH STERNBERGER. (Studien und Bibliographien zur Gegenwartsphilosophie.) Leipzig: S. Hirzel. 1934. 155 pp. 4.50 M.

One of the best features of modern German *Existenzphilosophie* consists in its analysis of the concepts and facts which have hitherto been the subject only of ethical discussion and the religious sermon. Jaspers has achieved even more in this direction than Heidegger. The fact of "givenness," or better, "not-givenness," of death has been analyzed in this way by the *Existenzphilosophie*. The great danger in this type of analysis, however, is that the disciples often make a scholastic doctrine out of an explanatory hint. The book, *Der Verstandene Tod*, is an excellent example of this aberration. The book is like a philological discussion which connects a given fact (or contradicts it) to the point where all the flavor of the original work is lost. It is impossible to give a real survey of the book as the material is so interwoven with the context of Heidegger's assumptions and language that a short summary is impossible. The bibliography at the end of the book containing the names of the

critical reviewers of Heidegger's book is very significant, as one can get from the very names of the critics a good picture of the circles interested in Heidegger's work.

M. T. G.

Max Schelers Phänomenologische Systematik. Mit einer Monographischen Bibliographie Max Scheler. GERHARD KRAENZLIN. (Studien und Bibliographien zur Gegenwartsphilosophie.) Leipzig: S. Hirzel. 1934. 103 pp. 3.80 M.

Kraenzlin's book, *Max Schelers Phänomenologische Systematik*, is the first attempt at giving a systematic presentation of Scheler's work. Until now all articles and books written on Scheler have dealt only with certain parts or aspects of his philosophy. Kraenzlin looks upon Scheler's work from a high philosophical stand-point and he has given a short, clear, and well-written outline which can be recommended to all who want to get an insight into Scheler's philosophy, even though one can not agree with Kraenzlin's assumption that Scheler's life-work is only the modification of some ultimate principles already laid down in his first large work, the *Materielle Wertethik*. Scheler's iridescent and abundant mind, which took up every phase of modern thought, can not be included within a single frame-work. The man who is interested in transcendental psychology, in the ethics of absolute values, in the "Genius of the War" and pacifism, in a phenomenological Catholicism and a sociological relativism, and finally in a new anthropological metaphysics, has too rich a mind for such a simplification of thought. Kraenzlin's statement that Scheler's phenomenology can be understood by applying the so-called first principle of phenomenology, *that there is a connection between the essence of the object and the essence of intuitional experience*, and his statement that Scheler's philosophy is based on the "loving" intuition of values and essences is valid. But this statement is only valid for the first period of Scheler's work, the time of the *Materielle Wertethik*, and not for his later development, for instance, for the *Wissensoziologie*, for the *Geistphilosophie*, and his posthumous work. In spite of all objections, however, this first attempt at a systematic outline of Scheler's work is an excellent piece of work.

M. T. G.

Peter Sterry: Platonist and Puritan, 1613-1672. A Biographical and Critical Study with passages selected from his Writings. VIVIAN DE SOLA PINTO. Cambridge: At the University Press. New York: The Macmillan Company. 1934. xiii + 242 pp. \$3.50.

Peter Sterry was a force in religious affairs under Cromwell. He was of Puritan training, a student at Emmanuel College, Cam-

bridge, in the 1630's, and an avid reader of Plato, the Platonists, the Jewish religious literature, the German mystics of the late Middle Ages, and (to a less degree) Descartes, Bacon, and Spinoza. He became chaplain to Cromwell. He disliked the rigid orthodoxy of the Presbyterians as he rejected the "sensualities of the Papacy." Like Milton (with whom he was often associated) he could have said that "new presbyter is but old priest writ large." He furthered Cromwell's effort to organize a national and comprehensive church. After the Restoration he lived a quiet and retired life.

Professor Vivian de Sola Pinto of University College, Southampton, gives us a meticulously complete account of his life and writings (many of which exist only in manuscript form) and prints nearly a hundred pages of selections from his writings. The selections are far too scrappy: they are evidently selected to illustrate his literary gifts rather than his reasoned development of his philosophy,—though for a mystic Platonist this method is less unfortunate than it would be for most philosophers. Sterry was not mentioned in Principal Tulloch's classic volumes, but had a chapter devoted to him eight years ago in F. J. Powicke's book on the Cambridge Platonists. Professor Pinto brings out the essential feature of Sterry's philosophical position by contrasting him with Richard Baxter. Sterry took consistently the stand that "nothing is mean and vile, seen in a right and universal light." This neo-Platonic thesis led him to a monism that emphasized divine immanence. Thus to Baxter he seemed to break down the distinction between Christianity and paganism, to destroy the doctrine of special revelation, to identify Christ with universal intelligence and so to grant too much authority to non-Christian philosophers, and to weaken the force of moral distinctions by suggesting the ultimate redemption of all men. The issue between Sterry and Baxter has appeared in one form or another in practically all centuries of Christian history.

S. P. L.

The Philosophy and Psychology of Sensation. CHARLES HARTSHORNE. Chicago: University of Chicago Press. 1934. xiv + 288 pp. \$3.00.

In this ambitious speculative essay Professor Hartshorne pursues the concept of sensation into the related fields of psychology, esthetics, epistemology, and metaphysics, arriving at the conclusion that experience constitutes an "affective continuum" in which "all qualitative contrasts, in whatever dimension, repeat recognizably the contrasts characteristic of affection in its typical cases, so that these contrasts may be said to generate the continuum. Such polarities

are joy and sorrow, self and not-self, liking and disliking, etc." (p. 9). Among the more striking philosophical implications of this hypothesis are these: affective tone is the stuff of which the entire content of consciousness is composed; idealism, in a pan-psychistic version, is vindicated, and we are justified in our spontaneous conviction that "love, which is to say, in its lowest terms, the sensitiveness of living beings for each other, is the key to the nature of things" (pp. 13-14).

Professor Hartshorne has developed his hypothesis in considerable detail and has taken pains to relate it to the most recent empirical findings in the various subjects concerned. Though the theory of sensation here advanced is admittedly out of harmony with accepted doctrine in many quarters it finds some aid and comfort in quite specific experimental data and also in the speculative suggestions of contemporary scientists and philosophers. Thus fortified in the most minute and the most grandiose regions of experience, its present deficiency seems to me to lie in a want of consideration for those intermediate principles and "middle-sized facts" which are required for balance and solidity, even in speculative philosophy. It is perhaps in this direction that further modifications of the hypothesis—foreshadowed by Professor Hartshorne in his 'preface—are to be sought.

A. E. M.

Considérations sur la Marche des Idées et des Événements dans les Temps Modernes. (A.-A.) COURNOT. Texte revu et présenté par F. Mentré. Paris: Boivin et Cie. 1934. Vol. I, pp. xxxl + 351; Vol. II, pp. 374. 60 francs.

The logical, mathematical, and economic works of Cournot are so much better known than his writings in the field of the philosophy of history, that a one-sided view of his teachings has been the result. The *Considérations* herewith presented were first published after the Commune and have therefore not only the interest inherent in their subject-matter, but additional interest as an historical document. Cournot's philosophy of history is almost unique in emphasizing the influence of chance events in history. This does not mean that he neglected general trends when they occurred nor denied the possibility of laws of social development. He did deny that any general explanation could cover the whole field of history. His work is also important in that it interprets its subject-matter more broadly than was customary in his time. Political changes are correlated with and subordinated to cultural events. His work was bound to suffer from its scope, but when due allowance is made for that, it remains one of the most interesting and suggestive mem-

bers of that literary tradition in which are to be found *The City of God*, the *Scienza Nuova*, and recent popular treatises on the growth of modern civilization.

G. B.

La Connaissance. Mathématique, Technique, Humanisme, Métaphysique. JULIEN PACOTTE. Paris: Félix Alcan. 1934. vi + 193 pp. 15 francs.

The author surveys certain branches of mathematics, physics, chemistry, and technology, as regards the newest lines of investigation. He lays most stress on the right of a science of technics to be rated as parallel to experimental physics, since both are actively constructive. In general, his exposition is too cursory to be of value to the otherwise uninformed, and his own comments are little more than "It is remarkable that . . ." or "It is a curious fact that. . ."

H. T. C.

Judaism as a Civilization: Toward a Reconstruction of American-Jewish Life. MORDECAI M. KAPLAN. New York: The Macmillan Co. 1934. xiv + 601 pp. \$5.00.

Although this work is conceived as a program for contemporary Judaism, it is an admirable exposition of a philosophy of religion in general as well. For Judaism the doctrine that "the Jewish religion exists for the Jewish people and not the Jewish people for the Jewish religion" (p. x) implies, according to Dr. Kaplan, a denial of the orthodox position that religion must be the center and essence of Jewish life, and of the Reform position that Judaism is merely a universal religion, and, on the positive side, a cultivation of Jewish civilization as an organic national whole, the religious aspect of which is merely a self-conscious expression and instrument of the values of Jewish life. In practice this implies the building of a national home-land as a cultural center for World-Jewry, and a participation by all Jews of the diaspora in both their own national civilization and the civilization in which they happen to share as citizens. This may mean participation even in two folk-religions, the possibility of which would be denied by other theories of Judaism.

The more general thesis of this philosophy of religion is summed up in the following quotations: "All spiritual values, from those of Godhood to those of individual salvation, are irrelevant and mischievous unless they are based upon the interests and history of some particular community" (pp. 343-344). "It would be far more logical to see the end of all religion, than to promise a future to personal religion while pronouncing the doom of folk religion" (p. 341). "The mutual toleration of religions can come about only

through the recognition that each religion must strive to have its beliefs and practices meet the universal needs of human nature, and that each religion must cultivate the uniqueness which arises from the particular civilization constituting its background" (p. 331). "The difference in character between one civilization and another is not so much in the ideals they profess as in the social institutions they evolve as a means of expressing their ideals" (p. 419).

In working out his thesis in detail Dr. Kaplan practises what he preaches by exhibiting a wealth of both American and Jewish learning. His vigorous nationalism may be regarded as the counterpart to Nazi religious nationalism, with the significant difference that it provides a reasoned basis for toleration and hyphenation. Part V is especially suggestive for the theory of religion. Part VI, on Torah, appears to be a desperate attempt to revive the religious core of Jewish life and education, in spite of Dr. Kaplan's own thesis that the Judaism of the future will not be primarily religious.

H. W. S.

Filosofi e Moralisti del Novecento. ADRIANO TILGHER. Roma: Libreria di Scienze e Lettere. 1932. Pp. 321.

In a period like ours, when the cultivation of a special corner of a special field is increasing both as an approved custom and as a practical necessity, it is a delight to come upon a book such as that under review. Adriano Tilgher is one of those blessed mortals whose first-hand acquaintance with contemporary philosophical movements in five languages and twice as many lands is the despair of most American students. To us who can not see the forest for the trees, he presents a synoptic picture of Western thought in our time, interpreting each movement and each philosopher in the light of his contemporaries, in a style extraordinarily graphic, and from a point of view both critical and sympathetic. The book contains some thirty brief sketches of philosophical positions and tendencies from five to fifteen pages in length, each a clean-cut intaglio, a masterpiece of condensation that hides condensation, of brevity that brings the sense of leisure.

It goes without saying that the variety of opinions thus presented is very considerable and that such unity as the book possesses is in part chronological, in part the unity of the spirit which is breathed into it by the skill of the author. An external method which has contributed to this result is the grouping of the various thinkers introduced around the romantic tendency which Tilgher considers central for our time and which he describes as "a new intuition, a new experience, better still, a new taste, a new sense, a new orientation to life: a new culture which expresses itself in every domain of the spirit: art, religion, philosophy, morals, politics,

jurisprudence." It is, in short, "the cult of life as life, and solely because it is life." Most of the philosophical writers of our time, in Tilgher's opinion, share in this tendency, a few oppose it, but none can neglect it.

Seven of the little essays of the volume are devoted to Germany, three to America, two to Spain, twelve to France, six to Italy; for some reason that does not transpire, hardly any reference is made to British thinkers. No claim, in fact, is made that the work is exhaustive. But its very wide inclusiveness, its synoptic sympathy, and its great charm, make one wish that it might be translated into English and reach the large public which it deserves.

JAMES B. PRATT.

WILLIAMS COLLEGE.

Vorträge der Bibliothek Warburg. Herausgegeben von FRITZ SAXL. Vorträge 1930-1931. Leipzig: B. G. Teubner. 1932. xii + 304 pp. Tafeln I-XXX. 18 M.

These lectures make a distinguished contribution to the history of English culture, especially to the history of classicist influences and traditions. E. F. Jacob's "Some Aspects of Classical Influence in Medieval England" is a review of the extent of the study of classical grammar, rhetoric, and poetry in England from Benedict Biscop to Joseph of Exeter. Hans Liebeschütz in his "Der Sinn des Wissens bei Roger Bacon" attempts to show the sources in ancient philosophy of Roger Bacon's conception of knowledge. J. A. K. Thomson's "Erasmus in England" discusses the influence of Lucian in England through More and Erasmus. E. Cassirer's "Shaftesbury und die Renaissance des Platonismus in England" presents Shaftesbury's esthetic as the last great expression in England of the Platonic ideal of contemplation as opposed to the "inquisitorial" ideal of Bacon. Perhaps the most informative essay in the volume is Edgar Wind's "Humanitätsidee und heroisiertes Porträt in der englischen Kulture des 18. Jahrhunderts" which contributes a critical analysis of the interrelations of the esthetics of Hume, Sir Joshua Reynolds, Gainsborough, and Garrick. The remaining lectures in the volume are: "Chaucer, Shakespeare und die Antike" by W. F. Schirmer; "Inigo Jones und der Theaterstil der Renaissance" by Oskar Fischel; "Classicism and Romanticism in the Poetry of Walter Savage Landor" by E. de Selincourt; and "The Position and Function of Classical Studies in Modern English Education" by Sir Richard W. Livingstone.

H. W. S.

OTHER NEW BOOKS AND JOURNALS

THE PERSONALIST. Summer, 1934. A Quantum View of History: *Ralph Tyler Flewelling*. Truthseekers and Soothsayers: *F. C. S. Schiller*. Goethe: The Poet of Aspiration: *J. W. Buckham*. The Individuality of the Real: *Herbert Wildon Carr*. Ideal-Realism: Part Two: *N. Lossky*.

REVUE NÉOSCOLASTIQUE DE PHILOSOPHIE. Tome 37, No. 42. Bergsonisme et Métaphysique (II): *Ch. Lemaître*. L'exigence idéaliste de la philosophie contemporaine: *A. Forest*. Pour la philosophie intégrale: *M. Blondel*. La philosophie de Przywara: Métaphysique de-créature: *A. Favre*. Thomas of Sutton, O.P. (cont.): *D. E. Sharp*. (Ce fascicule contient en supplément la première livraison du répertoire bibliographique qui sera désormais publié régulièrement.)

MORRIS MORRIS. *Man Created during Descent at the Beginning of the New Stone Age, that is, not more than about five or seven dozen centuries ago*. London & Edinburgh: Marshall Brothers. Baltimore: Universal Baptist Church. 1926. 111 pp.

NOTES AND NEWS

Attention is called to a new series (beginning Vol. XII.) of *The Philosopher, A Quarterly Journal of Practical Philosophy*, of which Thomas Greenwood is now editor. It is the organ of the Philosophical Society of England. Subscriptions (2s. 6d.) may be sent to the Secretary, 13 Woodlands Road, Barnes Common, London, S.W. 13. The table of contents of the first two numbers of 1934 (48 pp. each) are as follows: (No. 1) Philosophy and the Public. Reason in Action: *John Macmurray*. Reflection and Common Sense: *A. E. Heath*. Civilization and Modern Science: *Paul Painlevé*. Dean Inge Evaluates Science: *Isaac Hartill*. Psychology of the "Mass-Man": *Pelham H. Box*. (No. 2) Philosophy in the Schools. Individual Psychology and Education: *John Dewey*. Freudism and Religion: *Thomas H. Hughes*. The Limitations of English Aesthetics: *The Earl of Listowel*. The World-View of Bishop Barnes: *G. F. J. Temple*. Humanism and Truth: *R. J. Dingle*.

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Studies in the History of Ideas. Vol. III. Edited by the Department of Philosophy of Columbia University. (Columbia University Press.) 500 pp. \$3.50. Contents: John Dewey: *An Empirical Survey of Empiricisms*; M. T. McClure: *Greek Genius and Race Mixture*; Richard McKeon: *Renaissance and Method in Philosophy*; A. G. A. Balz: *Cartesian Doctrine and the Animal Soul*; S. P. Lamprecht: *The Rôle of Descartes in Seventeenth Century England*; F. J. E. Woodbridge: *Locke's Essay*; Howard Selsam: *Spinoza; Art and the Geometric Method*; J. T. Baker: *The Emergence of Space and Time in English Philosophy*; Rudolf Kagey: *Coleridge*; Sidney Hook: *Hegel and Marx*; H. W. Schneider: *Mill's Methods and Formal Logic*; Ernest Nagel: *Impossible Numbers; a Chapter in the History of Modern Logic*; Gail Kennedy: *The Pragmatic Naturalism of Chauncey Wright*.

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THE JOURNAL OF PHILOSOPHY

"TO SLEEP, PERCHANCE TO DREAM"

SLEEP, and the other seeming lapses into unconsciousness to which man and the higher animals generally are subject, present, if they are to be taken at their face value, damaging evidence against such forms of idealism, pluralistic or monistic, as consider the ground of all being to be self-conscious or personal mind. If Reality is composed of a plurality of persons, it looks as if all of these self-conscious entities normally lost their sense of personality and their consciousness of themselves, and therefore their essential being, for some eight hours out of every twenty-four, and were liable through disease or external injury to become dead to the world and to themselves, at any time, for durations of indefinite extent. Self-consciousness, then, far from being the essence of the Real, looks like an intermittent and fitful accident, maintained only under special conditions, and enjoying at the best no more than a precarious hold upon existence.

It is therefore a pertinent and pregnant question to ask the idealist what becomes of the ground of his being when it apparently ceases to exist in a nap or a faint or from a knock on the head. It is useless to invoke an unsleeping, unfainting, divine consciousness and to say that God keeps the sleeper in mind while he slumbers, and thus preserves him overnight. For, even so, his *self-consciousness* and that complex of experience which constitutes for him his body have been blotted out as far as he is concerned, and have been reduced to mere ideas in the divine experience, essentially no different from the ideas of his pyjamas or his bed, which are also retained in the divine mind when he ceases to be conscious of them as well as of himself. But how can God preserve the sleeper's *percipere*, even as *percipi*, when that *percipere* is slumbering, or, in other words, is not there to be perceived? God must know our friend for what he is at the moment, a sleeping or non-self-conscious being, and therefore a being of which self-consciousness is not the essence. What, then, is his essence? Presumably it is what God perceives him to be, whether asleep or awake. His body, however, is the only persistent and uninterrupted perception that God has of him. It is all that is left of him in the divine mind, during the night, and is during the day the central *percipi* of his own awakened *percipere* of himself, as well as the prolongation of God's noc-

tural perception of him. Surely, this is sailing very close to materialism. Indeed, it is materialism so far as our friend is concerned, since it is not his self-consciousness but his body that constitutes the enduring core of his being, and it is a matter of academic interest only whether that body is reducible to electrons or to the *percipi* of an outside observer.

Again, what happens in the metaphysical world when the alarm clock goes off in the morning? When the buzz and whir in the divine mind rings the sleeper awake, and self-consciousness revives, where does his restored awareness of himself come from? Does it involve merely a change in the divine thought, which thinks his self-consciousness back into him by now regarding him as awake rather than as sleeping? If so, his waking awareness of himself, or in other words, his self-conscious personality, is no less a content, essentially, of the divine mind than are his sleeping body and the bed on which it sleeps. The *self-consciousness* to which he is restored is sustained not by his own *percipere*, but by divine *percipi*. Or rather, his consciousness of himself becomes merely an intermittent mode of the Absolute's consciousness of itself. In short, pluralistic turns into monistic idealism.

If, however, the waking of the sleeper is not effected by God, but is merely recorded by the divine mind when and as it occurs, what does it involve, and what does bring it to pass? The sleeper can not rouse himself, since in the divine *percipi* to which he has been reduced for the night there is no basis for the reappearance by day of his individual *percipere*. Each morning his consciousness of himself is without apparent rhyme or reason suddenly superadded to God's consciousness of him. The explanation, then, of his waking up—if there be an explanation—is experienced neither by himself nor God. But, in that case, idealism has given way to realism. And even if there is no explanation, and the sleeper's waking is a purely tychistic event, even so there has crept into our universe a third factor—chance—whose operation is independent both of *percipere* and *percipi*, human and divine.

If we now turn to monistic idealism and regard the finite centres of consciousness as phases or partial expressions of an absolute self-conscious or personal mind, sleep proves to be no less embarrassing. How can such a mind lose consciousness of itself even in part, if its essence is self-consciousness? Supposing that a part of it remains awake while the other part slumbers, the waking part must note the unconsciousness of the sleeping part and thereby recognize that its being does not consist of consciousness alone, but includes another more fundamental factor, which exists whether or not it is self-conscious.

If the monistic idealist tries to deal with sleep as he does with error, imperfection, and finitude, by saying that it is *aufgehoben* in some wider synthesis in which it is so supplemented and corrected as to become positively contributive to the absolute self-consciousness of the whole, he runs into new troubles. For, apart from the perplexities involved in any and every form of this summary process of transubstantiation, special difficulties arise in connection with the resolution of a lack into a fulness of self-consciousness. The transfiguration of finite evil into absolute good, and of finite error into absolute truth, involves, after all, merely an alteration in the value and significance of conscious content—a difficult enough feat, to be sure, but one not without a certain plausibility at first sight. But the conversion of an utter absence into a complete presence of self-consciousness outdoes the miracle of the loaves and fishes. That event only requires us to believe in the multiplication of something already there in part. But the idealist would have us turn a sheer emptiness of the table into a feast, and transform an absence of guests into a convival gathering.

Now, I have the profoundest respect for the ability of the Absolute to chew, swallow, and digest the most unpalatable and unpromising experiences and make of them the very chyle of its perfection. Beside it the most robust ostrich is a pale dyspeptic. But I do not see how even the Absolute's stomach can turn the absence of a stone into bread and digest the lack of its own gastric juices.

When I sometimes timidly voice these perplexities to some of my idealist friends, particularly if they happen to be devotees of personalism, I am met with a smile in which condescension and pity struggle for the mastery. "Poor, benighted, stumbling fool," they say to me, "do you never dream?" It is useless for me to reply that, being ordinarily a sound sleeper, I generally do not. They merely shake their heads and commiserate my invincible ignorance. In reality, I am informed, I have never closed my mind's eye at all. I have dreamed without pause or interruption the whole night through. Only, on waking I have forgotten that I have done so. Some of my dreams, indeed, I do remember, and some again, though their content is forgotten, leave me with a sense of having dreamed. Those memories are fragmentary remnants of the life I lead while asleep—crumbs fallen from a table groaning with a nocturnal feast of reason and flow of soul, which is each morning whisked out of sight, but which is ever available as a kind of spiritual buffet for the restoration of my soul, if perchance during the day I should nap or faint or be punched on the jaw. By thus assuming the presence of *forgotten* self-consciousness during so-called unconscious periods, my personalist friends satisfy themselves that their personalities

are never really in abeyance, despite the apparent facts. Their impression of having been unconscious while asleep is mere absent-mindedness and is an illusion pure and simple.

At this explanation I strain a little. My objection is doubtless an example of "wishful thinking," for I prefer what I call sleeping soundly to dream-infested slumbers. But on bleak philosophical grounds, also, it seems to me that if the personalists are right, the word "sleep" should not be in our vocabulary at all. When I awake each morning I ought not to be able to say, "I was certainly dead to the world last night." I ought only to complain, "Dear, dear, I have completely forgotten what I was doing all night long." Surely the sense of having slept is quite distinct from the sense of having forgotten what we dreamed about or even that we dreamed—hence the separate words. The one carries with it the feeling of once having been aware of something that now escapes us; the other of not having been aware of anything at all. The forgotten dream perfumes our waking consciousness with a delicate and elusive sense of past presence and present absence; dreamless sleep, on the contrary, is scentless, and leaves us in the morning with no taste of past possession and present loss in our mouth.

Moreover, to seek to interpret sleep and other seeming lapses into unconsciousness in terms of forgetfulness is to invoke the blind to lead the blind. For it is almost as difficult to see how a being whose essence is self-conscious mind can forget as to see how it can sleep. If such a mind can cease to be conscious, even temporarily, of portions of its experience, there is no essential reason why it can not lose consciousness of the whole of its experience for the time being, or even perhaps for good and all. Self-consciousness is, then, accidental, not essential to it, and the amount and duration of its mental activity is determined by some deeper, non-conscious phase of being.

Again, what becomes of the forgotten content? It must somehow be conserved, since much of it reappears, or may reappear, as revived memory. It can not be conserved in the self-conscious mind of the individual, since, if it were, it would not be forgotten and absent from his self-consciousness, but present to it. To suppose that it is perhaps stored and kept fresh in a divine mind, to be returned to the individual on appropriate occasions, does not alter the fact that it has actually lapsed from *his* conscious mind, and that *his* survival of its loss implies that there is something in him more fundamental and essential than his mindfulness. All in all, to try to preserve the essentially self-conscious and personal character of Being by prescribing forgetfulness as an antidote to apparent cessations of mental activity is to employ a remedy scarcely less fatal in its effect than the sleeping sickness it is designed to cure.

Furthermore, we may point out that turn-about is fair play, and that it can be argued with equal logic, and with no greater disregard of apparent fact, that our occasional sense of having, rather than our more habitual sense of not having, dreamed during sleep is the real illusion. For the so-called memory of a dream may be nothing but a play of the waking fancy, accompanied by a fallacious sense that the images experienced here and now also occurred during last night's slumbers. I am merely imagining this morning that my sleep was disturbed. In reality it was dreamless. Far fetched as this view is, it is no more so than the personalist contention.

Then, too, if we can infer the existence of forgotten dreams in dreamless, from the occurrence of remembered ones in dream-broken, sleep, we have no reason to suppose that their content is in any way different from that of the dreams we recall. Indeed, the asserted continuity of the two raises a presumption in favor of their similarity. But remembered dreaming is a sort of madness and its occurrence is in a sense pathological. It occurs when the organism is disturbed, and its content represents an escape of experience from the conditions that in its waking state make it coherent, significant, and sane. A sleep, then, stuffed with forgotten dreams would presumably be a period of delirium. And if Freud be right, it is probably just as well that we can not remember the adventures, frank or symbolic, that it forces upon us—adventures, incidentally, to which about a third of our life is devoted. But over these possible implications of personalism it were perhaps more decent to draw a veil.

Finally, if the ground of our being or of Reality be self-conscious personality, it is certainly very difficult to understand why self-consciousness should seem to involve so much effort and to invite so much fatigue. To keep us mindful of ourselves or of anything, incessant stimulus of a fairly intense and diversified sort is needed. Remove that stimulus, and consciousness at once begins to wane, and we to nod. Prolong it and keep us awake, and first we suffer, then go mad, and eventually die. Phenomena like these suggest that *percipere*, instead of being our *esse*, is rather an accidental mode or activity attained only under complex and intermittent conditions and maintained with difficulty and depletion of our energy. And if we regard sleep as replete with forgotten self-conscious activity, we are confronted with the curious spectacle of an entity, whose essence is *percipere*, obliged to forget what it really is for eight hours in order to be mindful of its essence for the remaining sixteen; and of an entity, moreover, to whose mortal existence nothing could be more damaging and in the end more fatal than an uninterrupted exercise of its essential function and awareness of its real nature.

Let us, however, grant the contention that sleep is but a forgetting. As we have seen, such forgetting differs from ordinary lapses of memory in that the events that are supposed to have slipped our mind have, to the best of our knowledge and belief, never been in our consciousness at all. It is more akin to amnesia, which is a rare and pathological phenomenon. The common-garden type of dreaming is integrated with my waking self. It is *I*, the self that recurs each morning, who remember or forget it. And if, upon awaking from what seems to me to have been a dreamless sleep, I am informed by some watcher by my pillow that I have talked and even walked in the watches of the night, it is still the waking self which is concerned, provided that my talk has been of the persons and the things with which it is familiar, and that my somnambulism has accommodated itself to the disposition by day of the furniture in my room. Such dreams are obviously reminiscent of *me*, and upon being told of my behavior I am willing to admit that *I* have dreamed them. But, had I babbled of unknown persons and dealt with novel objects, both my observer and myself might argue a case of dissociated personality.

Indeed, it is just such an alternation of dissociated personalities that the personalist is really invoking. The dreams he summons in order to preserve my *esse* as *percipere* during sleep, are completely severed from my waking self. When in his opinion I have been dreaming *them*, in my own opinion I have not dreamed at all. *I* disclaim emphatically all experience of or connection with them. And the watcher by my pillow would say that I have behaved, not as if I were dreaming, but as if I were sound asleep. Such dreams, then, if they occur are not *my* dreams. They are *spurlos versenkt*, so far as I am concerned; nor is there any sign, as there is in the case of the somnambulism of which I awake unaware, that they are reminiscent of my daily life. They form rather the experience of some mysterious night-watchman who takes my place when I am asleep. He and I, the day-watchman, are neither of us aware—at least, so far as *I* know—of the doings or even the existence of the other. We replace one another without meeting. There is no loafing for an instant at the patrol-box, passing on the news of the day—or night—after the fashion of policemen, no presentation of arms and giving of the pass-word, as when one sentry relieves another. The day-watchman is not aware that another goes on duty and takes his place. All he feels is that he himself is going or has been off duty. If his sleep is dreamless, the interval is a blank. If he has dreamed, it is *he*, not the night-watchman, that has done the dreaming. For that matter, the day-watchman can be made to admit the existence of his nocturnal colleague only by being argued into com-

pletely discrediting his own impressions. He can only be made to *infer* the presence of the night-watchman. For to make him *feel* that presence would involve making the feeling of being awake and the feeling of having been asleep identical. The very necessity, then, of having to persuade me by argument that when I seem to myself to have slept dreamlessly, I have really dreamed, is enough to dissociate *my* self-consciousness from that of the unknown dreamer. In a word, the two watchmen are merely the holes in each other's doughnuts.

But if the personalities of the two are never self-consciously confluent, the transition from the one to the other is not given in the self-consciousness of either; just as in switching from the parking lamps to the headlights of an automobile, there is an instant when neither is on. What, then, becomes of the equation *esse = percipere* at the moment of the relief of the one watchman by the other?

Again, even admitting the personal identity of the two watchmen, what, we must ask, constitutes that identity? Certainly it is not to be found in the self-consciousness of either, since the day-watchman declares that *he* is not self-conscious when the other is on the beat. But if neither one is conscious of his identity with the other, what does link them? In any case, it must be something external to both of them, if *esse = percipere*. But if the link is external, the two are like Siamese twins who are not welded into each other's flesh and blood but are glued together by some foreign substance. And it is difficult to see how through such a link, even if it be the divine *percipi*, the common blood of an identical personality can course.

But let us waive this point also, admitting the continuity of the self-consciousness of the waker and with that of the dreamer of the forgotten dreams. Sleep really is nothing but a forgetting. Does that solve our problem? By no means. For what of the other forms of loss of self-consciousness—the lapses that come with the swoon, the undercut on the jaw, the concussion received in an automobile or airplane accident. Have we the right to apply, without further argument, our interpretation of sleep to them? I think not. For sleep is a normal, healthy, and recurrent condition of the organism, whereas the unconsciousness induced by injury or disease is not. We might as well argue that because a rosy complexion in a normal person indicates continuous and complete activity of the lungs, the hectic flush of the consumptive does the same. Nor have we in profound concussions or comas or even swoons, as we have in sleep, the sporadic occurrence of remembered dreams to suggest that they may teem from start to finish with forgotten ones.

Somewhere in the *Harzreise*, if I am not mistaken, Heine men-

tions an estimable young man who mistook the pangs of indigestion for religious experience, and I sometimes wonder if pluralistic idealism is not the fruit of a similar confusion. Dining not wisely but too well and an excess of bedclothes may contribute to it. Certainly I do not see how it could arise in a race of dreamless sleepers. To them it would be obvious that a part, at least, and perhaps the better part, of their *esse* was not *percipere*. They might be scholastics or materialists, perhaps, but idealists, or, at any rate, pluralistic idealists and personalists—never!

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KNOWLEDGE BY FIAT¹

IF IT be granted that there are external existents and events to be known, then the mind either passively receives their effects or meets them with some resources of its own. How the mind can have content purely its own, and what that content can be, are persistent questions. The answer of C. I. Lewis, in *Mind and the World Order*, is that the mind creates at will its own *a priori*. The stress on this *a priori* by fiat and the implications drawn from it by Mr. Lewis, do not seem to have solved or even dissipated certain major problems of the old epistemologies. My contention is that the *a priori* by fiat, as explained by Mr. Lewis, although prior to *some* experience, is fundamentally *a posteriori*, or else the unaccountably well-directed creative will is more of a mystery than a solution.

Knowledge, initiated by fiat, is cited by Mr. Lewis as most familiar in mathematics. There the mind at will, by definitive legislation, creates its own categories. Such a system with its implications soundly developed has to be "true" in the sense that no subsequent experience can refute it, for anything contrary to it is excluded—by fiat. Thus we have the familiar Euclidean, Lobachewskian and Riemannian geometries, all "true" despite contradictions when the systems are compared to each other. Since the mind patently has this power, used seriously in mathematics and logic, and playfully in games and fiction, the question posed is whether a great deal more knowledge, or indeed all knowledge, may not be more obscurely and yet nevertheless truly of this sort. Lewis, by careful elaboration of its possibilities, offers it as the essential method of all genuine knowing.

His position, in its barest outline, is this: The mind creates categories. It has no Platonic vision of eternal forms, nor a Kantian

¹ Read, in part, at the Western Division of the American Philosophical Association, Bloomington, Indiana, March, 1934.

limitation to two schema and twelve specific categories. The ontologically existent world, external to and independent of the mind, is not a world of transcendent reality nor an unknowable noumenal realm. It is simply the world of external being in which we find ourselves. The mind, functioning in this world, has a power to will categories—any number of categories; it can create more and more and more. Since the mind created them, their intension is set and final, no matter what subsequent experience offers. In fact the ear-mark of the *a priori* is, according to Lewis, “that we can maintain it, in the face of all experience, come what will” (p. 231). Whether any extension can be found for it is another story and an important one. The mind can not compel the “givens” in experience to fulfill its categories, but, fortunately, nature has frequently presented “givens” which do fit into the very categories our minds have invented. When the categories thus have extension, we “know.” As far as, and no farther than, the implications and intensions of the original categories can lead, just so far can we know. Anything beyond that in experience is either ineffable, or else in a special category of the “unintelligible” or of the “unreal” which is the storage place for any experience not yet interpreted. The mind also invents many other categories of definite intension, for which no extension has yet come to us. The round-square is such an extensionless category. Without extension, that category and its implications are “true” but useless, at least as yet, for who knows what the external world may, in the future, present to human minds, beyond their present range of experience?

All that we *can* know of the external world is just as much of it as circumstances beyond our jurisdiction bring to us, and only as much of that as happens to fit into the categories we have invented. This independence of our control, however, imposes no fixed limit upon our knowledge. Our busy minds need to have only inexhaustible inventiveness to turn out more and more and bigger and better categories on the theory that, if the cap fits, the “given” will put it on, and so, if we can invent enough kinds and sizes of caps, the “givens” in experience will, one by one, step out of the category of the unintelligible, and play an exemplary part in line with our predictive anticipations.

If this be the actual and perhaps sole way the mind works, then, whether we like it or not, we are forced to a distinctly pragmatic or instrumental redefinition of knowledge. This redefinition is not because of any utilitarian or subjective concern about the benefits of knowledge, but because of a quite orthodoxly Aristotelian acknowledgment that, as the mind is made to function, so must it function. By this theory, the mind is not primarily a receiving organ. It does not receive transcendental visions, nor innate endowments of clear

and distinct ideas, nor copies of reality via sense impressions. The external world, by Mr. Lewis's account, does enter into our consciousness, but awareness is not knowledge, for mere awareness of a "given" is a wholly ineffable experience. Knowledge for a mind, whose function is to create and then to develop implications of what it creates, consists of knowing what leads to what. When experience goes along with our categories, then we know. When experience, once fitted into a category, obstinately fails to lead on to whatever that category leads to, then there is error—but, note, it is error of application or identification only. After the error, the category, with its implications, inasmuch as it is a fiat *a priori*, is still true. The remedy for error is more and different categories, and if we have a sufficient store to draw on or are lucky in our inventiveness, it will turn out that our predictions from the new category will also be that to which the experience leads. If we are not lucky, we simply do not know, for knowledge is prediction, and not acquaintance with anything *per se*.

An interesting problem now apparent is how we happen to be fortunate enough for our minds, so often and continuously to create categories which do turn out to have extension in the external world. It might be accounted for by various old theories in new dresses, e.g., pre-established harmony of mind and external world, a final cause luring both mind and world in a common direction, or a pseudo-Kantian limitation to the activities and directions of which the mind is capable. Lewis will have none of these. He says the mind creates according to purposive will, and that will is the product of our natural make-up in interaction with the environment in which we find ourselves. In fact he calls it the product of "social history." Our social experience inspires, or compels us, to create precisely the categories both useful and useless, which we do create.

Here we are, then, with our biological and, so be it, also our spiritual make-up, placed in an external world independent of our control, which, however, impinges on our consciousness in a way that is wholly ineffable until we invent by sheer power of creation a category into which whatever we experience happens to fall. To be sure, we create useless categories, too, under which no givens in experience fall, but, with gratifying frequency, we happily invent useful ones. The curious claim, in both cases, is that the reason why we made up just those categories, both useful and useless, is our social experience.

If the effect of our environment and social history is the determinant of our will, there seems to be a strongly empirical influence which, paradoxically, gives direction to the *a priori*. How the first category in any human mind is what it is proves rather hard to fathom. Of course, now that we are farther along in social history

we can inherit or receive by instruction quite a store of useful categories to start our own conscious thought-lives. For those we do not thus receive, maybe, in babyhood, although the experience of some regular recurrence of "givens" was ineffable or even subconscious, that recurrence stirred the mind to perform its natural function, i.e., to create a category, and, if the mind was fortunate, the intensional predictions from that category so neatly fitted the recurrences in experience that we began to have "knowledge." If, unfortunately, we, as babies, first categorized a mother's care to imply tenderness, and the mother we knew proved to be cruel, we started early with error. Our mother's mistreatment of us, however, continued to be ineffable, until our little minds invented, or were given by others, the hateful category, "cruelty," and then we "knew." In either case the empirical determined the *a priori*. Yet Mr. Lewis, while conceding that knowledge starts in experience, claims that the *a priori* represents an attitude in some sense freely taken, so the second problem aroused is how far our wills are free to go.

Mr. Lewis emphasizes a difference between *a priori*, fiat, or legislative generalizations and empirical generalizations. A bona fide *a priori* generalization is perpetually true. No exceptions are admitted. On the other hand, an empirical generalization has no legislative power, so any exception limits or disproves it. The empirical generalization is purely in extension and is an account of existent things or events. In this epistemology, however, no account is possible without prior creation of categories as instruments of interpretation. For illustration, we are offered the *a priori*, intensional "All swans are birds," whereby it is intended that anything admitted into the previously created category, "swan," must likewise be admissible in the previously created category, "bird." As an empirical generalization, we are offered "All swans are white" and this represents a "factual connection of two classes." To "know" these two classes, in the first place, we had to create, by fiat, the categories, "swan" and "white creatures." Frequent coincidence of "givens" in experience which fitted into those two categories led to their association in a generalization. This is a social product in the sense that our interaction with our environment and with the experience of fellow-minds, induced us to relate these two categories. It is hard, then, to see why the first generalization, "all swans are birds" is not similarly, although perhaps more remotely, rooted in a coincidence of "givens" in experience.

How do we know that "All swans are birds" is a bona fide *a priori*, at least until we apply the proposed test, namely, that subsequent experience fails to quash it? The reason subsequent experience fails to quash it is because, as said, it represents an attitude "in

some sense like free choice and deliberate action" (p. 233). It is our free choice and deliberate action to exclude any experience that would quash it. Now, if we have very strong wills and are very stubborn, this same criterion of the *a priori* would enable us to turn the generalization "All swans are white" from an empirical into an *a priori* principle, for we can freely and deliberately refuse to admit that the annoying, black, Australian birds are swans. We can will to invent new categories until we arrive at one under which those birds do fit. Until then, they will be "unintelligibles" or at most just "birds." If I am an unimportant person when I will this, nobody else will pay any attention and I may be quite lonely with my wilful principle, to which others do not agree. But if I am the world's leading ornithologist, I shall confidently expect my will to prevail over that of less important persons, and when I rule that an essential intension of swans is whiteness, then all swans *are* white, no matter what! All exceptions excluded—by fiat.

This analysis of the theory would be equally applicable to more important instances as, for example, the determination of mass as an intension of physical substance. These fiat rules seem, both by common sense and by Mr. Lewis's theory, to be something more than lucky guesses apropos of nothing. Some persistent "givenness" in experience seems, at least, to have set the mind in these directions. Somewhere the will entered in to make this or that generalization an intension, to hold good come what may thereafter. How arbitrarily our wills are free to do this with generalizations is a very interesting problem. Lewis definitely insists that the *a priori* is not utter free-lancing, but, at the same time, he grants that one *may* hold to any category or principle he pleases, no matter how solitary his stand, or how useless the implications from it. Stubbornness in this respect, he says, has only pragmatic grounds to prove it unreasonable. He has not shown, and doubtless does not wish to show, that these pragmatic grounds, which now determine the rigidity as well as the impulse and direction of the creative will, are *non-empirical*. In fact, as the only factor which is brought in as a determinant, even though it is veiled as "social history," the empirical appears to be legislatively prior to the *a priori*.

As far as one can penetrate into the character of the social history, to which Mr. Lewis refers, it seems he has brought us a long way round to a very old problem, namely, when and how can empirical recurrences of the "givens" in common human existence in the external world be formulated as predictive generalizations? This step in generalization has all the character of the inductive leap, which is no more solved in this epistemology than in any other. Added to it here, however, is another complication. At some stage,

the will, as it follows the bent of human concern with the world, steps in to legislate against exceptions. It fixes certain predictive generalizations as permanent intensions. There will perhaps be protests that Mr. Lewis does not mean it quite this way. Something in social history, however, has kept the mind working pretty constantly in useful directions, with its intensions mostly along lines which also have extension. What else in social history could have made the vigorously creative will avoid dangerous inflation of knowledge by undue minting of purely verbal and hence worthless categories? With the rejection of old epistemological gods, or eternal harmonies between mind and world, or original structure of the mind to account for the direction of intelligence, either empirical "givens" must, as indicated above, legislate for the *a priori*, which thus is quite distinctly *a posteriori*, or else this creative will is a new epistemological mystery.

Mr. Lewis plainly does not need any traditional *a priori*, and it is, to say the least, surprising to transmute the *a posteriori* into an *a priori* by fiat. What his epistemology does suggest is further need to see how many of the old problems of the *a posteriori* can be solved, and then to show how the will determines which *a posteriori* categories and propositions are to have their intensions permanently fixed. He indicates this is determined by "the similarity of human animals and of their primal interests, and the similarities of the experience with which they have to deal" (p. 20). His real case apparently rests on this metaphysical assumption, and he admits that such correlation is a miracle, "simply the miracle that an intelligible world exists" (p. 145), one of the initial "Great Facts" before which man is inarticulate (p. 237). Too many familiar epistemological problems still lurk in this theory of *a posteriori* reasoning, controlled, not by any primary *a priori* content of the mind, but by the "miracle" of preestablished ontological similarities.

"Conceptualistic Pragmatism," as Mr. Lewis calls his epistemology, turns out to be sheer empiricism, with a pseudo-*a priori*, which modifies the essential nominalism of the whole theory not one whit. An *a priori* fact, namely, the aforesaid preestablished miracle, is assumed: but an *a priori* fact is not *a priori* knowledge. If, however, there is to be *a priori* knowledge, it must presumably be because the *a priori* fact provides for it. Mr. Lewis evades rather than utilizes the conspicuous possibility here. Part of his *a priori* fact is "the similarity of primal interests." I do not know of anything, except his personal fiat, that enables him to deny that these interests are elements in knowledge. In the search for a genuine *a priori*, Descartes would have welcomed and utilized them as such. Descartes unhesitatingly points to "a thinking being is" as evidence of a

primal interest, and, by the same token, unquestionably a bona fide *a priori* in knowledge. That this element in knowledge is similar for all is the *a priori* fact, but the actual interest is *a priori* knowledge. But Mr. Lewis can not see this, for, by his fiat, knowledge must not include any "iron-clad and inevitable set of categories," not even as rudimentary a one as the above, so he evades consideration of the specific nature of these primal interests. Pursuit of them might lead dangerously far along the path of Cartesian rationalism.

To insure a common world of meaning, Mr. Lewis prefers to assume a miraculous set of conditions, very iron-clad and inevitable, in that man is born with them. For these conditions to function epistemologically, the external world has to make demands on the organism, which the organism "needs" to meet. This is a most strictly empirical approach to knowledge. Under these circumstances, however, it is embarrassing to be told that the external world, which, as we have seen earlier in this paper, gives impulse and direction to the mind's activity, is a chaos. *A posteriori*, we are to get order from chaos! Mr. Lewis, at this point, will ask us not to forget that he provides an *a priori* to produce order in knowledge, but, be it also remembered that Mr. Lewis's *a priori* is an *a posteriori*.

The explanation offered in this epistemology is, as said, that chaos makes demands on us, and "the first and basic classification which the mind, confronted with experience, must make is the dichotomy of real and unreal" (p. 240). This is the only way we can get along with chaos. Chaos, however, it is further said, helps us to this extent—it gives us "qualia," which are repeated so that they are recognizable from one experience to another. In each recurrence of qualia, the experience is ineffable, i.e., it may not "feel" alike to different people, but each repetition of the experience will feel *sufficiently* the same to one and the same person so that he will universalize that "feel" in his mind, and, consequently, have, what Mr. Lewis calls, a subjective universal. Mr. Lewis argues that, no matter how swift and instinctive it may be, "the recognition of a presentation by its qualitative similarity to past presentations makes interpretation possible," i.e., makes categories applicable (p. 291). This recognition seems to be the initial step to, if not in, knowledge, so it is important to ask *what* actually is recognized? *Mirabile dictu*, it seems to be order in chaos! Only when we find at least the minimal order of recognizable repetition, are we able to interpret or know a "real" as, for example, a mother's care, as cited above, be it tender or cruel.

If this be confusing, how can it be any less so, while founded on an account of a chaos which is orderly, and an *a priori* which is *a posteriori*? Although obscured by this confusion of terms, which,

by Mr. Lewis's fiat, are given intensions so different from the commonly familiar ones, the real aim of the Lewisian positivism seems to be clear enough. The aim is to escape two much older confusions. The first is the old epistemological difficulty of an iron-clad and inevitable set of categories in the mind *ab initio*. This has always meant confusion because no agreement at all has been attained as to the number and nature of those categories. Not even the Cartesian attempt to wipe the slate clean and start with one universal, inevitable category or principle, eliminated the confusion of disagreement. The alternative to pursuit of this already most discouraging line of investigation is to deny that there are any primal categories, common to all minds, "fixed by original human endowment" (p. 234). This is the way out, which Mr. Lewis seeks. The second, old, epistemological difficulty, which he would avoid, is that the external world is presented to all normal minds, via the senses, in an identical fashion. This, also, has always been confusing, because no two people dependably see or hear or sense in any way the same things exactly alike, nor does one person, at different times, sense the same thing in the same way. The obvious alternative to a uniform world perceived variously is a chaotic world "known" uniformly. It is by this latter alternative that Mr. Lewis seeks the way out of the second, old confusion.

To seek, however, is not always to find, or all that one finds may be what one had at the start, even though, for a while, a new view of it makes it appear novel. To avoid the venerable confusions, just stated, Mr. Lewis sought, on the one hand, a mind-power to direct the course of thought when all content is given to it *ab extra*, and, on the other hand, an external world which may appear or "feel" different to every person or to the same person at different times, and, indeed, actually be endlessly varied in itself, but which will, nevertheless, supply content for an orderly mind. In this extremely difficult undertaking, Mr. Lewis finds what he pronounces to be "on the one side, a Platonic heaven of our concepts with the beautiful clarity of their patterned interrelations and their absolute truths, and, on the other side, the chaos of given experience" (p. 307). "The bringing of these two together is," in his opinion, "a matter of trial and error."

Close examination of this "find" makes it seem far from novel. By previous denials, Mr. Lewis's epistemology can not admit a traditional, separate realm of Platonic ideas to afford an initial endowment of the mind by reminiscence, nor can the mind, in any way, have, as its native content, such ideas. The result is the anachronism of a strangely nominalistic Platonic heaven, and, surely, that revives hoary epistemological difficulties which were so acute in the Scholastic

days of yore. The chaos of given experience turns out to have enough order to determine, as already indicated, the impulse, the direction, and the pragmatically, reasonable rigidity of our concepts, and epistemologists will still ask, as they always have, how it is possible for this independent order to affect the mind in a decisive way. Furthermore, it is not a matter of trial and error to get these two together, for, in any such sheer empiricism as this, the former primarily arises from the latter. When, however, we want to see how far our concepts, once they are formulated, can, by implication, run ahead of experience, without divergence from the external order of "givens," then we do have man's greatest adventure, by trial and error, with conceptual systems. Behind the confusion of terms, as employed by Mr. Lewis, there is a vitally important stress on the flat stage of this adventure, but to essay this as a complete epistemology is to be plunged back into old problems, with more conviction than ever of the futility of attempts to escape them.

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IS TIME RELATIVE?

IN THIS JOURNAL (Vol. XIX [1922], pp. 238-241) there is an article by me called "The '*t*' of Physics" from which I wish to quote the following. "The '*t*' of physics is not real time at all." "The '*t*' of physics is the fourth dimension of experience lived as real time, but treated mathematically as if it were space." "We must be careful in drawing conclusions from equations in which '*t*' exists regarding our experience in real time."

Twelve years have passed and many modern physicists are still mixing up the "*t*" of physics with the *time* we all live. Just this mix-up is one reason why relativity is so hard to understand. Relativists say "Time, as measured by clocks, is relative." Now, in the first place clocks do *not* measure *time*. Clocks measure the *space* passed over by some *motion* during a definite absolute *time interval*, which is not the same thing at all. The situation physicists are now in, is very similar to the situation thinkers were in just after Galileo's work was published. At that time both sides undoubtedly said "The sun rises in the east and sets in the west," but the followers of Galileo did not mean what they said; they meant "The earth is turning on its axis." Ambiguous language certainly has caused a thick smoke screen to surround Einstein's great work.

Just what is a clock. In everyday life a clock consists of a circular *space* scale over which a body (the hand) *moves*, and we note a *space* displacement on the clock dial, but we call it "*time*."

Just that is our error. We make a similar error when we say "The sun rises." So far as our life on this earth is concerned that language error causes no trouble, but the moment we move away from the earth, in imagination, then, if we do not watch our step, that language error will cause trouble.

The clock of higher physics appears superficially to be something very different from a common clock, but fundamentally it is not different. Let us ignore superficial differences and get down to basic realities. The heart of a common clock is a balance wheel (or a pendulum) urged into *motion* by a spring (or a weight). All of the rest of the mechanism is simply our way of noting the *number* of oscillations of the balance wheel during some one definite *absolute time interval*. By *absolute time interval* I mean simply that between any two *non-simultaneous* instants a certain definite number of world events has happened. This number is, of course, unknowable for us because we are finite beings, but surely that does not alter the fact that the past world events between two different instants must be *absolute* and definite in number. It is impossible for me to come to any other conclusion.

"To oscillate" is defined as "to move to and fro" and this "to and fro" implies a *space* gap having, of course, two ends: but this *motion* over a *space* gap necessarily implies that the start is "earlier" than the finish, and so it implies a *time interval*. It follows therefore that the phenomenon known as a "clock" involves a triad composed of (1) a *motion*, (2) a *space gap*, and (3) a *time interval*. If the clock of higher physics starts with what is called a "light wave" as its balance wheel (to avoid mechanical friction) it still can not get away from my triad. Its unit oscillation must involve (1) *motion* over (2) a *space* gap, during (3) a *time interval*. Remember the only difference between one oscillation and one-half an oscillation is a *spacial* difference. If we count the oscillations we really get a summation of *space* gaps, but we say we get so many time units, and just that language ambiguity is one reason why the physical meaning of Einstein's work is so hard to understand. The vital point is this. Of the three realities forming my triad, *space* alone can be turned into a number and hence *space* measurements alone can enter the mathematics of physics. Whenever we say we are measuring time, or temperature, or pressure, or volts, or anything else, we really measure the *space* displacement of some "pointer" and then draw inferences; our instruments are purposely designed to allow us to do just that.

Of *motion* we can note differences but not *how much* (a number) difference. We can note a similarity of *motions* which we call "relative rest" and we can note "faster" or "slower." All of the higher

forms of animal life can note these things as "percepts," but these things can not be turned into *numbers*. Of *time* we can note "earlier" or "later" and changes in the "quality" of our experience, just as all other animals can, but no one of these things can be turned into a *number*, hence these realities can not enter mathematical physics. *Space alone* can give us "quantity," that is *numbers*. On this point see what Eddington has to say about "pointer readings" as a means of getting "quantity" (numbers) in his book *The Nature of the Physical World*, Chapter XII, pages 251 ff.

The reason why confusion exists regarding this matter of *time* is because of the inevitable existence of my triad of *motion*, *space*, and a *time interval*, in every observed phenomenon of the dynamic world in which we live. Wherever you find *motion*, you will also find a *space* gap and a *time interval*, but the only one of these three you can turn into a *number*, that is "measure," is *space*.

I put it to you that relativity does *not* apply to the *time*-third of my triad; it applies to the *motion*-third of my triad; but surely this is old in Newton; Einstein did not discover it.

Motion, *space* and *time* are tied together in all of our observations of external reality, or, to put it into a better form, philosophically speaking I would say "The human intellect has to analyze experience artificially into a triad, in order that science can help us to predict." For me, this analysis is an artificial thing which we have to make, but after having made it, we must be careful when we start to describe the characteristics of the three members of this triad separately. A characteristic true of one member must not be tied to either of the other members. Just that has been done, however, by relativists.

There is no fault to be found with what modern physicists *do*; the confusion arises from the way they talk (and write) about what they do, because this ambiguous talk has certainly created a modern Tower of Babel.

PASADENA, CALIFORNIA.

A. A. MERRILL.

BOOK REVIEWS

Goethe und Hegel. HUGO FALKENHEIM. Tübingen: J. C. B. Mohr (Paul Siebeck). 1934. 84 pp. 4.50 M.

This study, published as one of the *Heidelberger Abhandlungen zur Philosophie und ihrer Geschichte*, is by an author who has written both on Goethe and on Hegel before. It is in character—and approximately in date—a centenary study. It would hark back to that sentiment of one hundred years ago which found in Goethe and in

Hegel complementary poetic and philosophic expressions of essentially one wisdom. According to the author, this wisdom arises from a common epic sense of life, and is the wisdom of an objective idealism, the essence of which may be stated for both poet and philosopher in the words of Goethe: "The spirit of the real is the truly ideal" (p. 11). The differences between Goethe and Hegel can be approached best in terms of the fact that the element of the poet is imaginative vision, that of the philosopher speculative thought. The author just stops short of calling Hegel "der Philosoph der Goethischen Weltanschauung" (p. 4).

The parallel citations from Goethe and Hegel, set forth in elaboration of this thesis, and the references to their expressed appreciation of one another, are very illuminating. Most convincing is the congruence of Hegel's esthetics in basic points with Goethe's art and criticism. Telling too is Hegel's enthusiasm for Goethe's views of nature, and one realizes in this connection how essentially poetic Hegel's philosophy of nature is. The convergence of poet and philosopher in their apprehensions of polarity, conflict, and rhythm in life, and in the upshot of their theodicies, in their respective affirmations of development through struggle, seems to me somewhat less complete than the author allows.

The middle section of the study, to be sure, sets forth many of the great divergences between Goethe and Hegel: the much more pronounced naturalism and empiricism of Goethe; his egoistic subjectivity with its very positive evaluations of the individual, of sense, and of feeling; his more esthetic than political conception of freedom; in fine, the centering of Goethe in love, of Hegel in the spirit of institutions. Had the implications of these differences been more freely explored, the study would, in my opinion, be more adequate. But the author sums up Goethe's distinctiveness as arising from his "lyrisches Ichgefühl," which was lacking to Hegel, and presses to the conclusion that Goethe's insights as "Herzenskundler" supplement rather than contradict those of Hegel as "Geschichtsdeuter" (p. 83). He recognizes that the conception of moral freedom in *Wilhelm Meisters Wanderjahre* is more Kantian and Fichtean than Hegelian, but finds Goethe's development to the deeper truth attested in his tragedies, especially in the *Iphigenie* and the completed *Faust*. And did not Hegel regard tragedy as the summit of art, nearest to philosophic truth, and himself call *Faust* "die absolute philosophische Tragödie"?

H. L. F.

Spinoza e due Antecedenti Italiani dello Spinozismo. FAUSTO MELI.

Prefazione di Guiseppe Saitta. (Studi di Lettere Storia e Filosofia. Publ. dalla R. Scuola Normale Superiore di Pisa. III.) Florence: G. C. Sansoni. 1934. viii + 199 pp. 18 Lire.

Fausto Meli died in 1931 at the age of twenty-two, leaving behind him the memory of great intellectual promise and three essays which are now published by one of the professors to whom he acknowledged indebtedness. The first essay, "Il Pensiero Religioso e Politico di Fausto Socino," states the thesis which all three essays illustrate: the Reformation, which arose from the spiritual renovation of the Renaissance, nonetheless negated that spirit and involved itself in contradictions which are resolved in the work of Fausto Socino, Jacopo Aconcio, and in general in Spinozism. In Spinozism, or in its anticipations, are contained the foundations of what is modern in philosophy. The revolt against scholasticism still figures large in this version of the history of philosophy, but the intellectual revolt is posterior to, and even directed against, the work of the Reformation: Luther was the great hero of faith, Melancthon the most liberal and tolerant spirit, but it was Fausto Socino who laid bare the foundations of human action, saw its effective value, revealed the inner reason from which it flowed and laid the foundations of modern, unprejudiced, autonomous culture (pp. 15-16). Socinianism resolved in the philosophical monism, which was the great achievement of Humanism, the numerous dualisms which the author finds in earlier thought: it abandoned a theology which no longer corresponded to the effective needs of culture, it abandoned the interminable discussions which smashed the vital germ of religion into infinite sects, it unified the sphere of the divine with that of the human and the world of grace with that of nature (pp. 42-43). In sum, it substituted a rationalism, according to which truth is a process and a conquest, for the medieval intellectualism, according to which it was a datum. Scholastic intellectualism had defined its truths in fixed dogmas that led—as did the Protestant reform—to intolerance; Socino, by casting off useless theology, prepared the typically modern concept of tolerance. S. Meli can, therefore, find numerous echoes of the Socinian doctrine, not only in the philosophies of Bruno and Spinoza, but in the moral and religious ideas of the Cambridge Platonists (who were called Socinians by their opponents) and in the political history and organizations of Holland and England. The brief second essay, "Iacopo Aconcio" (pp. 87-95), based on the *Stratagemata Satanae* rather than the *De methodo*, presents a similar philosophic vision of man, naturalistically conceived, endowed with vices, passions, and errors, conquering a growing truth. When one turns therefore from his predecessors to Spinoza himself (*Parte II.*

"Sulla Metafisica Razionalistica dello Spinoza"), it is to find the chief value of his philosophy not in a dogmatic metaphysics, but in a method, which is real, concrete, and rationalistic in this modern sense. The method is "cognitio reflexiva," and therefore, S. Meli finds, emphasizes, no longer some cognizance the mind may have of the system of reality, but rather the spontaneous and productive activity of the mind. S. Meli labors with considerable ingenuity to substantiate his idealistic version of Spinoza, and frequently the ingenuity results in striking and fantastic interpretations. Thus he contrasts Thomas Aquinas and Spinoza (p. 100) by arguing that for the former the metaphysical object remains always extraneous to speculative thought, the object of faith and intuition, of induction rather than of demonstration, whereas for Spinoza, "thought seeks to adequate itself to its object by resolving the opacity of its immediate position in the clarity of reason." This surprising statement is substantiated by Spinoza's argument that God is *Causa sui* in refutation of Thomas's objection to the *a priori* demonstrations of the existence of God on the grounds that God has no cause! But the interest of this book does not lie primarily in the historical or philosophical accuracy of S. Meli's interpretation. Rather it lies in the insight it contributed to the history of thought by adding one more to the interpretations of the modern spirit and its revolt against the frigidities and rigors of the Middle Ages.

R. McK.

Leibniz et les Demonstrations Mathématiques de l'Existence de Dieu.

JOSEPH IWANICKI. Paris: J. Vrin. 1933. 319 pp.

Although M. Iwanicki conceives his study of Leibniz as directed to an apologetic end, namely, the refutation of atheism which he finds rampant in the twentieth century much as it had been in the seventeenth, his final conclusion (p. 307), oddly enough, is that the attempt of Leibniz to demonstrate the existence of God miscarried. Moreover, he attributes the failure to the circumstance that Leibniz was mistaken in his confidence that the mathematical method can be applied to metaphysics, and his effort to rehabilitate the ontological argument therefore ran against the fallacies (recognized by Thomas Aquinas, Abicht, Mendelssohn, and Kant) which are involved in the illegitimate passage it makes from the logical realm to the real. But although M. Iwanicki, as apologist, might conceivably have set forth a stronger defense of the Leibnizian arguments, as historian he has presented an excellently conceived version of the system, evolution, and intellectual environment of Leibniz's thought. Since the problems of theology are of crucial importance in the philosophy of Leibniz, M. Iwanicki's conscientious presentation of the demonstrations

of the existence of God involves a sketch of the philosophic method and the organization of the sciences developed by Leibniz; since the elaboration of Leibniz's proofs is carried on with full awareness of the past history of the discussions and stated in works that figured in the contemporary controversies, M. Iwanicki is constrained to give an excellent sketch of the intellectual situation of the seventeenth century.

M. Iwanicki's book is divided into four parts. In the first is sketched the dangers—or more precisely the accusations—of atheism as found in the philosophies of the seventeenth century. Although M. Iwanicki goes no further than to give the history of the names mentioned by Leibniz in this connection, making no effort to sketch in full the controversies in which the accusation was bandied, the pages of Leibniz furnish a remarkably rich discussion of these—as they do of most other—intellectual movements of the time. M. Iwanicki considers first atheists properly so called, second philosophers, like Descartes, Spinoza, Hobbes, Locke, Toland, whose principles were said to lead to atheism, sketching in both categories Leibniz's reasons for that denomination. The second part of the book, in the course of recounting Leibniz's search for a method by which to demonstrate rigorously the existence of God, presents an analysis in considerable detail (founded for the most part on Couturat, but with supplements, alterations, and criticisms) of the progress of Leibniz's analysis of mathematics and logic. Part three presents an analysis of attempts in the seventeenth century to demonstrate the existence of God which were stated in mathematical form or pretended to mathematical clarity and precision, notably the *a priori* demonstrations of Descartes, Spinoza, Tschirnhaus, and several *a posteriori* demonstrations, among them, that of Locke; the exposition then proceeds to Leibniz's analysis of the faults of these demonstrations. The fourth part is devoted to Leibniz's mathematical demonstrations of the existence of God: two early *a posteriori* proofs, one based on the existence of motion, the second more general, based on the existence of motion, size, figure, and consistency; two *a priori*, which are re-workings of the ontological argument, the one supplementing it by a demonstration from the possibility or perfection of God, the other restating it in terms of possibility and necessity (If a being which exists necessarily is possible, it exists actually); finally the evolution of the proof, which Leibniz was eventually to consider the most cogent, from the harmony of things. M. Iwanicki's exposition is based at each point on expert and variegated citations of the complex corpus of Leibniz's work. By its faithfulness to the text of Leibniz it is rendered a solid and reliable contribution to the history of thought in the seventeenth century extending in interest far beyond the apparently restricted field indicated by its title.

R. McK.

OTHER NEW BOOKS AND JOURNALS

PHILOSOPHICAL REVIEW. Vol. XLIII, 4. Time and Causality: *Everett W. Hall*. Causation and Cognition: *Ira A. Mackay*. Relational Categories and the Quest for Unity: *Marvin Farber*. The Place of A. A. Cournot in the History of Philosophy: *Merritt H. Moore*. Discussions—Metaphysics: The Domain of Ignorance: *Paul Weiss*. Professor Savery's Views on Parsimony: *Owen N. Hillman*.

INTERNATIONAL JOURNAL OF ETHICS. Volume XLIV, No. 4. Virtue and Knowledge: *W. A. Merrylees*. Professor Alexander's Ethical Views: *A. C. Fox*. On Golden Rules: *J. O. Hertzler*. The Evolution of Pacifism: *Robert C. Stevenson*. Discussions: Values: Ethical and Economic: *C. E. Ayres*. The Treatment of Morality in Mr. Campbell's *Scepticism and Construction*: *P. T. Raju*.

Bergson, Henri: *La Pensée et le Mouvant*. Essais et Conférences. Troisième Edition. Paris: Félix Alcan. 1934. 333 pp.

Sunavala, A. J.: *Adarsha Sādhu*. An Ideal Monk. With a Prefatory Note by F. W. Thomas and a Foreword by Sylvain Lévi. Cambridge: At the University Press. New York: The Macmillan Company. 1934. xiv + 185 pp. \$1.75.

NOTES AND NEWS

We have received the second circular of the Eighth International Congress of Philosophy, which will be held at Prague, Czechoslovakia, September 2-7, 1934, and print the program as follows:

SUNDAY, SEPTEMBER 2

16:00-18:00 Tea at the Společenský Club.
20:30 Opening of the Congress.

MONDAY, SEPTEMBER 3

9:15-12:30 General Session. "Les Frontières des Sciences Naturelles."

Speakers: P. LANGEVIN (Paris); H. DRIESCH (Leipzig).

Subjects proposed for discussion: "Le domaine des sciences naturelles; Les droits des sciences morales; Le caractère scientifique de la métaphysique; La vitalisme, etc."

16:15-19:30 Group A. "L'IMPORTANCE DE L'ANALYSE LOGIQUE POUR LA CONNAISSANCE."

J. ŁUKASIEWICZ (Warszawa): Die Bedeutung der logischen Analyse für die Erkenntnis

F. C. SCHILLER (Oxford): How is Exactness possible?

J. JÖRGENSEN (Charlottenlund) : Die logischen Grundlagen der Naturwissenschaften

R. INGARDEN (Lwów) : Der logistische Versuch einer Neugestaltung der Philosophie

16:15-19:30 Group B. "NORME ET REALITE, I."

G. DE GIULI (Torino) : I più moderni atteggiamenti della filosofia della scienza

A. WENZL (München) : Leben und Geist

B. GIBSON (Birmingham) : The Nature of Social Unity

C. A. EMGE (Weimar) : Das Aktuelle als bisher übersehener direkter Grundbegriff

W. LUTOSLAWSKI (Dziegiellów) : La philosophie peu-telle être nationale?

16:15-19:30 Group C. "RELIGION ET PHILOSOPHIE, I."

A. F. LIDDELL (Tallahassee) : Religion and Philosophy

A. MASNOVO (Milano) : La philosophie du christianisme

F. OLGATI (Milano) : Religion et métaphysique

C. J. SHEBBEARE (Durham) : Hegel's Logic and Modern Religion

16:15-19:30 Group F. "PROBLÈMES PARTICULIERS, I."

R. JOLIVET (Lyon) : Les embarras de l'idéalisme

J. WATSON (Kingston) : A Discussion of Dr. Whitehead's Philosophy of Nature

H. GOUHIER (Lille) : Positivisme et révolution

R. BAYER (Paris) : La méthode esthétique objective et l'investigation psychologique

TUESDAY, SEPTEMBER 4

9:15-12:30 General session. "POINT DE VUE DESCRIPTIF ET POINT DE VUE NORMATIF DANS LES SCIENCES SOCIALES."

Speakers: W. HELLPACH (Heidelberg) : Zentraler Gegenstand aller Soziologie: Volk als Naturtatsache und als Geisteschöpfung; T. V. SMITH (Chicago) : Norm and Fact in Sociology

Subjects proposed for discussion: Doit-on d'abord constater les faits, ou bien instituer des normes?—La neutralité en sociologie—Le concept de peuple, au point de vue biologique et juridique, etc.

18:30-21:30 Group A. "LES VALEURS."

N. HARTMANN (Berlin) : Das Wertproblem in der gegenwärtigen Philosophie

- J. LAIRD (Aberdeen) : Must Values be Mental?
 P. LEON (Leicester) : Values and Power
 C. KRUSÉ (Middletown) : Is Subjectivism in Value Theory compatible with Realism and Meliorism?

18:30-21:30 Group C. "RELIGION ET PHILOSOPHIE, II."

- N. LOSSKIJ (Prague) : La notion chrétienne de la catholicité
 S. FRANK (Berlin) : Die geistige Lage der Gegenwart und die Idee der negativen Theologie (docta ignorantia)
 C. GEBHARDT (Frankfurt a. M.) : Die Gesetzmässigkeit der religiösen Entwicklung
 C. WERNER (Genève) : Religion et philosophie
 L. NOËL (Louvain) : La notion de philosophie chrétienne
 B. JAKOVENKO (Prag) : Die Verteidigung des Atheismus

18:30-21:30 Group D. "LA LOGISTIQUE, I."

- Z. ZAWIRSKI (Poznań) : Bedeutung der mehrwertigen Logik für die Erkenntnis
 P. FRUTIGER (Genève) : Un nouveau scientisme
 C. MORRIS (Chicago) : Pragmatism and Logical Positivism
 F. KAUFMANN^e (Wien) : Die Bedeutung der logischen Analyse für die Sozialwissenschaften
 A. KASTIL (Wien) : Wahrheitsproblem in der Gegenwartsphilosophie
 G. BONTADINI (Milano) : La position du problème de la métaphysique et de l'expérience

18:30-21:30 Group E. "LA MISSION DE LA PHILOSOPHIE, I."

- P. FELDKELLER (Schönwalde) : Geophilosophie und Historiurgie
 J. ZOLLSCHAN (Karlsbad) : Anthropologische Bedingtheit der Philosophie?
 J. PETROVICI (Jassy) : Le réalisme comme tendance de la philosophie actuelle
 J. E. SALOMAA (Turku) : Eine Aufgabe der gegenwärtigen Philosophie

WEDNESDAY, SEPTEMBER 5

9:15-12:30 General Session: "RELIGION ET PHILOSOPHIE."
 Speakers: E. PRZYWARA (München); L. BRUNSCHVIGG (Paris)

16:15-19:30 Group A. "LA MÉTHODE DES SCIENCES NATURELLES ET DES SCIENCES MORALES."

- M. SCHLICK (Wien) : Kritik des Begriffes der Ganzheit
 K. BÜHLER (Wien) : Sprachtheorie und Philosophie

- H. J. POS (Amsterdam): La qualité et ses aspects quantitatifs
 J. KRAFT (Utrecht): Geisteswissenschaften als Naturwissenschaften

16:15-19:30 Group B. "NORME ET RÉALITÉ, II."

- J. CHEVALIER (Grenoble): Une cause spirituelle du déséquilibre moderne: l'absolutisme humain
 J. SAUTER (Wien): Rechtswissenschaft und Rechtsphilosophie
 L. ŠULCS (Riga): Les rapports entre la morale et le droit
 O. NEURATH (Haag): Einheitswissenschaft
 Miss H. D. OAKELEY (London): Historical Necessity and Moral Freedom
 F. WEYR (Brno): Rechtswissenschaft und Soziologie

16:15-19:30 Group D. "LA LOGISTIQUE, II."

- H. REICHENBACH (Istanbul): Die Bedeutung des Wahrscheinlichkeitsbegriffs für die Erkenntnis
 R. ZOCHER (Erlangen): Der methodologische Pluralismus und die allgemeine Logik
 K. AJDUKIEWICZ (Lwów): Über die Anwendbarkeit der reinen Logik auf philosophische Probleme
 R. F. FLEWELLING (Los Angeles): Quanta and the Absolute
 E. NAGEL (New York): Reduction and Autonomy in the Sciences

16:15-19:30 Group E. "PSYCHOLOGIE ET PÉDAGOGIE."

- A. GEMELLI (Milano): Psychologie et philosophie
 E. BRUNSWIK (Wien): Psychologie vom Gegenstand her
 G. TAURO (Cagliari): Rapporti fra il diritto penitenziario e la pedagogia
 T. GIVANOVITCH (Beograd): Les premières bases de l'éthique délictuelle
 K. RAMUL (Tartu): Psychologie und Geschichte
 J. BODA (Budapest): Les problèmes de l'éducation de l'intelligence

20:00 Meeting of the International Committee.

THURSDAY, SEPTEMBER 6

9:15-12:30 General Session: "LA CRISE DE LA DÉMOCRATIE."

Speakers: W. P. MONTAGUE (New York): Democracy at the Crossroads; E. BODRERO (Roma): La crise de la démocratie

14:00 Excursion to Konopiště.

FRIDAY, SEPTEMBER 7

9:15-12:30 General Session: "LA MISSION DE LA PHILOSOPHIE DANS NOTRE TEMPS."

Speakers: B. Croce (Napoli); E. Utitz (Prag).

16:15-19:30 Group B: "LA CRISE DE LA DÉMOCRATIE."

G. R. MORROW (Urbana): What is left of Liberalism?

V. BASCH (Paris): L'art et la démocratie

L. ROUGIER (Besançon): De l'opinion dans les démocraties et dans les gouvernements autoritaires

U. REDANO (Roma): Die Krise der Demokratie und die neuen sozial-politischen Auffassungen

J. B. KOZÁK (Praha): The Recrudescence of Naturalism and the Crisis of Democracy

G. GUY-GRAND (Paris): Démocratie, liberté et souveraineté

B. LAVERGNE (Lille): Un remède à la crise de la démocratie: la nécessité du double suffrage universel

16:15-19:30 Group D. "SCIENCES NATURELLES ET SCIENCES MORALES."

G. BACHELARD⁶ (Dijon): Les frontières des Sciences naturelles

E. MEYER (Altona): Die Ueberwindung des Mechanismus durch den Holismus, eine Versuch die Kontingenz der Naturgesetze zu beseitigen

F. LIPSIUS (Leipzig): Spielen sich die Naturvorgänge im Raume ab?

B. PETRONIEVICS (Beograd): Finitisme et monadologie

L. J. WALKER (Oxford): Relation of Philosophy and Science

J. MUKAŘOVSKÝ (Bratislava): L'art comme fait sémiologique

16:15-19:30 Group E. "LA MISSION DE LA PHILOSOPHIE, II."

S. RADHAKRISHNAN (Waltair): The Message of Philosophy for our Times

F. SEIFERT (München): Der Mensch als Problem der gegenwärtigen Philosophie

K. LÖWITH (Marburg): Nietzsche als Philosoph unserer Zeit

A. LALANDE (Paris): La mission de la philosophie dans notre temps

O. KRAUS (Prag): Besonderheit, und Aufgabe der deutschen Philosophie in Böhmen

16:15-19:30 Group F. "PROBLÈMES PARTICULIERS, II."

A. PETZÄLL (Gothenburg): Project of a Bureau of Philosophical Information

- H. NIMETULLAH (Istanbul) : Logique de la raison—logique de la conscience
 T. GOŚCICKI (Poznań) : L'idée de l'«intuitiver Verstand» de Kant
 E. SPERANTIA (Oradea) : Lois et formes de la pensée comme projections des propriétés de la vie (Psychovitalisme transcendantal)
 Y. L. FUNG (London) : Philosophy in Contemporary China
 E. HARMS (Zürich) : Reorganisation des philosophischen Unterrichts

20:00 General Session. Closing of the Congress.

SATURDAY AND SUNDAY, SEPTEMBER 8 AND 9

Trip to Mariánské Lázně (Marienbad) and to Karlovy Vary (Karlsbad).

During the Congress there will be an international exposition of philosophical works published from 1931 to 1934. Also there will be an "exposition de souvenirs et de documents relatifs à l'histoire de la philosophie tchèque" (organized by the Bibliothèque Nationale et Universitaire), and an "exposition consacrée à Bernard Bolzano" (organized by the Bibliothèque du Musée National). "Les archives de François Brentano" will be open to members of the Congress at the headquarters of the Société des Amis de François Brentano, in Prague.

Those planning to attend the Congress should send in their application for membership before July 31 to the Comité d'Organisation du Huitième Congrès International de Philosophie, Smetanovo n. 55, Praha I, Czechoslovakia, sending at the same time their subscription for membership to the Zemská banka, Praha II, Na Příkopě (compte du Congrès); active members: 120 couronnes tchécoslovaques; associate members: 70 couronnes tchécoslovaques. On receipt of the application, the Committee will send to each member a permit allowing a reduction of 33% on Czechoslovakian railroads and a membership card. The office of the Congress will be open beginning August 31 at Smetanovo Nam. 55, Praha I.

THE JOURNAL OF PHILOSOPHY

There is no similar journal in the field of scientific philosophy. It is issued fortnightly and permits the quick publication of short contributions, prompt reviews, and timely discussions. The contents of the last six issues are as follows:

Volume XXXI. No. 9. April 26, 1934.

The Status of Mind in Reality. C. W. HENDEL.

What is Materialism? SIDNEY HOOK.

Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 10. May 10, 1934.

Selection among Cosmic Images. HAYM JAFFE.

The Self, Given and Implied—A Discussion. EDGAR S. BRIGHTMAN and DONALD C. WILLIAMS.

Abstracts of Papers Read at the Thirty-fifth Annual Meeting of the Western Division of the American Philosophical Association, Indiana University, March 29-31, 1934.

Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 11. May 24, 1934.

Whitehead, Descartes, and the Bifurcation of Nature. ALBERT G. A. BALZ.

Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 12. June 7, 1934.

A Plea for Substantialism in Psychology. C. A. STRONG.

Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 13. June 21, 1934.

Eros. RAPHAEL DEMOS.

Specific Quality. CHARLES HODES.

Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 14. July 5, 1934.

The Present Dilemma in Philosophy. W. T. STACE.

The Realism of Common Sense. DANIEL CORY.

Some Recent German Critics of Phenomenology. ANDREW D. OSBORN.

Book Reviews. Other New Books and Journals. Notes and News.

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THE JOURNAL OF PHILOSOPHY

CAUSATION: AN EPISODE IN THE HISTORY OF THOUGHT

THE present situation in science and philosophy is extraordinarily interesting by reason of the diversity of views and beliefs upon the subject of causation. It may help somewhat to clarify this situation if we will briefly review the varieties of positions now current and their genesis.

There is among us a large group of persons who give allegiance to essentially animistic beliefs and conceptions. To them every occurrence is to be interpreted as the outward and visible sign of a supernatural agent who exercises a control over events which may, by appropriate means, often be influenced or changed. This animistic tradition is to be found not only among the religious groups, but also in many philosophers and some scientists who leave their scientific methods and techniques in the laboratory when they contemplate the rest of the world and man.

It is fairly well agreed that these animistic conceptions of the universe are probably the matrix of all our cosmologies and science. They are to be found in luxuriance among so-called primitive peoples to-day, where they appear in all important social activities and much of the material culture. Among peoples of Western European culture they may be regarded as survivals of an earlier culture which has been progressively superseded by what we call the scientific tradition.

This is not the occasion for tracing the successive steps in the displacement of animism by science, first through metaphysical speculations and then through the rise of mechanics, especially celestial mechanics.¹ What we need to observe here is that the concept of causation arises as a definite challenge to the notions of animism and to metaphysical conceptions of an underlying reality obscured by illusory appearances. It is essentially an acceptance of the world of events in terms of actual occurrences to be viewed as sequentially related, with an antecedent cause and a consequent effect. This acceptance of the conception of cause and effect is more than a mere assent to a concept or belief; it is a methodological principle which imposes upon its believers the obligation to doubt

¹ Cf. W. T. Bush, "Emancipation of Intelligence," this JOURNAL, Volume VIII (1911), pp. 169-180. See also the writer's paper, "The Development of Science," this JOURNAL, Volume XXI (1924), pp. 5-25.

any explanation or theory of non-causal events and to seek diligently for the causal relation and antecedent cause.

It is to be noted here that the causal principle found its strongest supporters among those who were concerned with the field of mechanics, astronomy, and what we now call physics. Rigorously pursuing their investigation of celestial events and of mechanical processes as varieties of causal phenomena, these earlier students achieved an amazing success in their work and thereby established the pattern of mechanical investigation and of causal thinking as the essential characteristic of scientific work.

The gradual acceptance of the principle of causation may be traced through the past three hundred years of scientific endeavor, as individual investigators in various fields adopt the view of sequential events and begin seeking for the determining cause of the particular events they are studying. The history of these developments has been traced by numerous writers to whom the reader may go for details (notably Whitehead's *Science and the Modern World*). What we are concerned with here is to point out the curious state of affairs today among scientific workers who are in every stage of acceptance and rejection of the principle of causation. The confusion and ambiguity arising from this condition is of far-reaching significance and merits rather serious consideration.

As suggested above, the principle of causation has appealed to scientific workers as a platform of protest against animism in all its phases (e.g., vitalism) and as a program for specific research. It is therefore of interest to see how the various sciences have embraced causation, beginning with astronomy, physics, chemistry, and then later biology and the social sciences. In each case there has been a fairly definite repudiation of older conceptions and beliefs and an appeal to scientific principles (i.e., causation) as individual investigators have been caught in the diffusion of this ever-widening movement. We can see this process of conversion, with an accompaniment of almost fierce evangelism, taking place to-day in certain fields of biology, in psychology, and in political science, economics, and sociology, where the new converts regard themselves as the apostles of *real* science and the leaders of a new movement.

While this process of change is taking place in the biological and social sciences, we may observe the extraordinary spectacle of an explicit and vigorous denial of causation issuing from the sciences which were the original leaders in the creation and use of the conception of causation. Unless the layman is egregiously misled by recent pronouncements of scientific workers in the field of the physical sciences, the principle of causation, at least in its earlier and naïve form, is now being relinquished as an instance of errone-

ous and confusing thinking, not unlike that of animism. That is to say, the present temper of scientific thought among the physical scientists is to view the notion of a determining cause as their predecessors once regarded animistic conceptions. They imply, if they do not explicitly say, that the conception of a cause is a rather dangerous trap for the unwary, a convenient form of *ad hoc* explanation or rationalization which ignores the more fundamental problems of science. Thus they are no longer inclined to say that such and such an event is "caused" by gravitation, or such and such a process is "caused" by this or that event. Rather, they are insisting that one must rigorously pursue the study of the sequence of events without imputing any determining, causal potency to any single point or process in that sequence. At least this seems to be the implication of much recent discussion among scientists, e.g., in relativity and by philosophers, e.g., Whitehead. Moreover, they are insisting that the clue to the understanding of events is to be sought in the organization or configuration of space-time which by reason of that structure or spatial arrangement gives rise to events as energy transformations. It is not a magical, prepotent cause but the very constitution of the universe which patterns or molds energy transformations into the events we seek to understand.

If we are to gain some insight into this remarkable development, we should hark back to the situation in which the principle of causation found its early application. In the study of the movement of the planets as in the study of the movement of particles and bodies, the astronomers and physicists were concerned with the action, reaction, and inter-action of essentially similar, if not identical, bodies or particles. This meant that for the purpose of their investigations and experiments they could ignore any differences of structure and function in the causal antecedent or in the particle or body being acted upon. Thus, if effect *C* (a resultant motion) appeared when *A* (a ball) acted upon *B* (a second ball), both being similar particles or bodies, the inference was clear that *C* was caused by *A* and all efforts should be focussed upon revealing the nature and action of *A* as the determining causal agent. This was peculiarly appropriate to the study of motion involving purely quantitative relationships.

The great success attained by this formulation and the methods it fostered, as we have already remarked, gave the principle of causation an enormous prestige which naturally enough has influenced investigators in all other fields. But mark what happened when the students of biology and the social sciences took over from astronomy and mechanics the concept of causation and as much of the methodology as they could assimilate and began to study their processes and events. Instead of similar and uniform particles or bodies

which could be treated as identical except for quantitative differences such as motion and mass, the biologist and social scientists were studying the behavior of complicated and many-functioning organisms which were exposed to the impact of totally dissimilar structures, processes, and events. The significance of this aspect of the biological and social sciences has been scarcely glimpsed and investigators have naïvely taken over the conception of causation derived from the study of the interaction of similar or identical particles and bodies in motion.

It should be obvious that to assume a causal relationship in biological and social events and to seek for causes or causal agents is to ignore the crucial rôle of the organism or structure in the production or creation of those events. A little reflection must lead to the belief that the conception of a cause, in the biological and social fields, where we find organized structures and functions, is totally misleading. If we observe events, processes, functions appearing in organisms (including man), it should be clear that those events and processes are ways of behaving through which the organization or structure of that organism is releasing or transforming energy. Moreover, it is being shown that unless the organism is prepared to react or behave, those events, processes, or activities will not be forthcoming. This means that the so-called causal agent is to be viewed as essentially a trigger action or stimulus to the stored-up energy of the organism which is expended in patterns appropriate to its structure and condition or state at the moment of impact. Instead of seeking the clue to events in a prepotent, determining "cause," we must look to the energy complex, its organization or structure and mode of energy transformation for an understanding of the event under scrutiny. In a recent paper, Pike and Chappel have stated this same view, defining a "cause" as any event which delivers energy to another event, in distinction from a limitation.²

The significance of this altered conception is to be seen in the shift of attention, from the so-called cause, to the energy complex or organism which gives rise to the event we are seeking to understand. The study of the energy complex, its organization and functioning, its prior history and changing physical states, become the focus of investigation and experiment. With the change in the rôle of antecedent from that of causal agent to the bearer of energy in such form that it releases energy in the organism, a new line of investigation is opened. We are beginning to discover that it is the specific quantity and quality of the energy delivered by the antecedent which touches off the organism; hence it becomes possible to substitute one

² Chappel, M. M. and Pike, F. H.: "The Organic World and the Causal Principle: A Criticism." *Science*, Volume 72 (1930), pp. 427-429.

antecedent event for another provided the substitute carries an energy equivalent. Examples of this are to be found in artificial fertilization, synthetic drugs, X-ray treatment of biological processes, etc. Moreover, by conditioning the organism we can substitute surrogates for the original biological stimuli, as Pavlov has shown, or render the organism immune to otherwise potent events and stimuli, such as other biological organisms (disease germs) or sexual partners (repression).

Out of the totality of events at any one place and time, only a few will operate upon a given organism. Put in another way, each organism in a given situation will selectively react to the totality of events there present, plainly demonstrating that the so-called causal agent or event is contingent upon the organism, its prior conditioning and present state.³

The movement away from causal formulations among the physicists has come about by a similar development wherein we find the investigator discovering that the significant factor is not the antecedent event, but rather the configuration in space-time which exhibits the event or process he is striving to understand. In consequence we see the effort being made to study the configuration or organization as the focal point, instead of the earlier preoccupation with the attempt to identify external causes and to prove causal relationships. In place of the older concern with the search for determining causes supposed to act upon passive but receptive entities, the aim now is focussed upon the energy complex or configuration to reveal which is the central problem. The idea of a potent, determining cause which brought about the effect is now seen to be essentially mystical and animistic, a case of action at a distance. This does not mean that the search for the so-called causal antecedents is being abandoned or ignored, but rather that the investigator is viewing the antecedent as part of the total sequence or configuration (space-time) which he is studying, with especial emphasis upon the particular event in that sequence. It is appropriate here to remark that this discussion of the principle of causation is not directly related to the situation arising from Heisingberg's Principle of Uncertainty.⁴

Viewed in the perspective of historical development this turn of affairs is highly significant and interesting and its implications for scientific thought and philosophical speculation are far-reaching. The title of this paper—Causation: An Episode in the History of Thought—receives ample justification from this amazing situation

³ Cf. the writer's paper, "The Problem of Learning," *Psychological Review*, Volume XXXIII (1926), pp. 329-351.

⁴ See "The Recent Change of Attitude Toward the Law of Cause and Effect," by P. W. Bridgman, *Science*, Volume 73 (1931), pp. 539-547.

which can not be too frequently or too rigorously examined, if we are to approach the immense labor of reconstructing our ideologies and concepts to meet the requirements of present-day scientific endeavor. We have lived so long on the product of seventeenth- and eighteenth-century labors, notably in mechanics, that it will require much urging and prodding before we will actively take up the task of revising our thinking, particularly since the acceptance of mechanics and causal conceptions is not yet universal even among the scientists.

This leads to the question which has been troubling the writer for some time. With biologists and the social scientists eagerly embracing the principle of causation as the very hall-mark of scientific rigor through which they can escape from animism and vitalism and unchecked theorizing, it seems likely that for years to come these investigators will be working along lines that we know now to be obsolescent. Is there any way of accelerating the diffusion of scientific thinking among scientists so that we may reduce this "cultural lag" in science? If anyone thinks the task here described is not difficult, let him discuss the question of causation with an economist or sociologist or psychologist, especially one who has but recently had a revelation of statistical procedure (again a bequest from statistical mechanics of an extremely valuable research instrument requiring discretion in its use). There one finds an almost passionate conviction that the conception of causation, plus statistical methods, will place the social sciences abreast of the natural sciences, meaning the natural sciences of a generation or two ago with which the social scientist made acquaintance in his high school or college days. Scarcely a hint of the revolution in thinking among physicists has filtered through to the social sciences, although some individual investigators are becoming troubled by the question of what these changes may eventually mean to their discipline. So long as social scientists cherish the concept of causation they are necessarily concerned with all manner of possible causal events and inclined to ignore the study of man and of human behavior which is the key, apparently, to social life. Moreover, they are almost obsessed with the notion of social forces in operation which produce specific effects, in direct emulation of celestial mechanics.⁵

This preoccupation with the analytical problem of the relation of two variables, as the *only* form of scientific problem, arises from adherence to the causal conception. When, as in psychology and psychiatry, the patent complexity of human behavior forbids the arbitrary formulation of a single causal agent or factor, the remark-

⁵ Cf. the writer's paper, "The Principle of Disorder and Incongruity in Economic Affairs," *Political Science Quarterly*, Volume XLVII (1932) pp. 515-525.

able conception of multiple causation has been invoked. By this notion it is possible to hold on to the conception of causation and yet smuggle into the conception various factors or processes active in the organism upon which the imputed cause is believed to be operating. Thus theories of multiple causation of personality development are seriously advanced wherein endogenous bodily processes are associated with exogenous social situations as potent causes (multiple causes) of the behavior being studied.

This practice is an excellent illustration of what Bott has called the split-field method, wherein one arbitrarily separates a unified process into various factors and then proceeds to bring them together again.⁶ If we were not so devoted to the causal principle we would be more ready to entertain a less artificial and clumsy theory of human behavior and our thinking would be by so much advanced. Perhaps we would be more aware of the rôle of prior experience in patterning behavior so that under the impact of a situation-stimulus the organism behaves as it has learned to respond. This view would not be inconsistent with the growing belief among physicists that what has happened to an atom or electron or any energy complex in the past is the major clue to its present behavior. Such a belief is, of course, directly in conflict with the notion of causation which ignores prior experience of the behaving entity in favor of the exclusive determining causal potency of an external factor or agency. The conception of past experience as operative in the present through the altered state or condition of the entity supplies a more illuminating and fruitful idea for scientific exploration.⁷

If we attempt to vision the future development of the social sciences along the lines now being pioneered by physics we should expect a concentration of interest upon the study of man and his behavior, upon the impact of culture upon personality, and the conditioning of the organism thereby, and upon the patterning of social life by the individual actors therein. Just as the physicist is seeking to understand the individual space-time configurations which give rise to events in place of the older statistical search for determining causes,⁸ so the social scientists of the future will study the organic

⁶ E. A. Bott, "Criticism and Ways of Inquiry," this JOURNAL, Volume XX (1923), pp. 253-271.

⁷ Cf. the writer's paper, "The Locus of Experience," this JOURNAL, Volume XX (1923), pp. 327-329.

⁸ "The great change which has come over physics in the last twenty or thirty years is due to one fact in particular, to the fact that, instead of studying the behavior of vast crowds of atoms and molecules and endeavoring, from that study, to deduce the properties of the individual, we concentrate more and more on the individual and try to deduce the probable behavior of the crowd. The newer method is, of course, the more logical one, and has been made possible by

configuration, man, and how his behavior, patterned by his experience, gives rise to the various aspects of social life we call economic, political, and social. But this shift in social science is not to be expected in the immediate future because social scientists are so engrossed with the cause and effect formula.

Here then is an opportunity for philosophy to contribute its services. We are desperately in need of a social science to replace the present body of abstract theory and conflicting beliefs and it seems clear that until the social scientists are able to encompass these newer conceptions and relinquish the older mechanical ideas of cause and effect, no real progress can be expected. So long as social science is taught and studied in terms of cause and effect and cosmic forces, and so long as our schools and colleges nurse along that tradition, the movement of intelligence must be impeded. The philosopher, as critic of ideas and conceptions, and as the prime agent in the age-old task of emancipating human intelligence from self-generated errors and fetters, faces here an opportunity of unparalleled significance and promise.

LAWRENCE K. FRANK.

NEW YORK CITY.

TRUTH, ERROR, AND THE LOCATION OF THE DATUM¹

Twinkle, twinkle, little star,
How I wonder where you are:
Up above the world so high,
Or in my brain, or in my eye?

DISCUSSION of the nature of knowledge has lately taken two paths: first, the attempt to describe the structure and function, the *Gestalt*, of the whole cognitive process, and second, the attempt to locate the cognitive datum with respect to the object of cognition (the light-sensum, for instance, with respect to the star which it enables one to know). The investigation of the first topic, whether by objective idealist, by radical empiricist, or by pragmatic naturalist, has confirmed the principle which I have called the innocence of the given: that knowledge is a complex sequence of judgment, interpretation, or problem-solving, and that the *givenness* of an entity, its presence in conscious experience, is therefore neither sufficient nor two of the great discoveries of modern times—radio-activity and X-rays. Each of these has given us the power of probing into the innermost depths of matter, and, although we are still unskilled in the use of these new weapons, each has led to important progress." (G. Shearer: "The X-Ray Analysis of Organic Compounds," *Science Progress*, Volume XX (1926), pp. 450-460.

¹ Read in substance before the Pacific Division of the American Philosophical Association, Los Angeles, December, 1933.

necessary for knowledge about it.² As an example of such analysis, singularly complete and credible, I shall refer to Mr. Harold Chapman Brown's account of mind as composed of organized "action-patterns," implicit and explicit responses and counter-responses, characteristically flavored in consciousness by the "kinesthetic halo." Knowledge, according to this "James-Lange" sort of theory, never consists "in a direct awareness of the sensum," but "in the repertoire of possible actions that can be set off by any sensum" and in the *feel* of such actions.³

On the second topic, the relation of datum and object, the most venerable doctrine is that of psychophysical dualism, according to which the datum is composed of an immaterial stuff with *no* spatial locus. The theory which I shall call physical dualism, on the other hand, holds that the datum is located in the nervous system of the percipient, while the theory which I shall call physical monism holds that it is located on the surface of the perceived object. The typical doctrine of the first sort is the Cartesian epistemology maintained today by Mr. Pratt and Mr. Lovejoy; of the second, the "under-the-hat" theory of Mr. Sellars⁴ and Mr. Russell; of the third, the new realism of Mr. Alexander and Mr. R. B. Perry. Now, it is my thesis that the description of the form and course of knowledge which is the result of the first sort of epistemology has a profound significance, still imperfectly appreciated, for the determination of the relation of datum and object which is the purpose of the second sort of epistemology. This is so, not, as is frequently suggested, because the former obviates the latter type of inquiry, and even less because it points to an easy conclusion, but because it vitiates almost all of the arguments which the sundry parties to the latter have brought against each other, and puts the question on a different plane from that of the *a priori* where it is usually meditated.

The party of psychophysical dualism, for example, has largely relied upon a conviction, like Mr. Barron's, that "introspection indisputably shows us that . . . mental states . . . are not identical with objects of the physical or logical orders," or Mr. Pratt's that

² "The Innocence of the Given," this JOURNAL, Vol. XXX (1933), pp. 617-628. I do not mean that the opinion is unanimous. It has its antithesis in the tradition represented by Mr. A. E. Taylor, that, "knowledge, so far as it really is knowledge, is immediate," is "vision." (*Proceedings of the Aristotelian Society*, 1928-1929, p. 30.)

³ H. C. Brown, "Mind—an Event in Physical Nature," *Philosophical Review*, Vol. XLII (March, 1933), pp. 130-155. I quote pp. 143 and 142. The notion of a "James-Lange" theory of knowledge I borrow from J. F. Dashiell, "A Description of Thinking," *Psychological Review*, Vol. XXXII (1925), pp. 54-73.

⁴ R. W. Sellars, *The Philosophy of Physical Realism*, p. ix. Mr. Sellars uses, but disclaims having invented, the phrase "under-the-hat."

the identification is "*clearly seen* to be nonsense."⁵ I have elsewhere tried to show that such convictions, like some more complex and special arguments of Mr. Lovejoy, suppose that the conscious content, by its mere presence, delivers far more of a cognitive account of itself than it really can.⁶ For the present, I shall confine myself to the issue between the physical dualist and the physical monist, throwing additional light only incidentally on the argument of psychophysical dualism. The essence of the argument against epistemological dualism, psychophysical or physical, is that if the cognitive datum were other than the cognitive object, as the dualist asserts, then true knowledge would be impossible. The essence of the argument against epistemological monism is that if the cognitive datum were identical with the cognitive object, as the monist asserts, then false opinion would be impossible. The arguments depend, respectively, on the assumptions that a thing can not be known unless it is consciously given, and that a thing can not help being known if it is consciously given. These assumptions, which would be correct enough if knowledge were pure contemplation, are equally groundless if knowledge is essentially a sequence of interpretative attitudes.

Since the whole question of even physical dualism versus physical monism is much too large for this occasion, I shall first indicate only very slightly the frailty of the monist's argument against the under-the-hat theory, and then give somewhat greater attention to the frailty of the dualist's argument against the theory of direct realism. The disproportion must be permitted partly because I have already defended *in extenso* the under-the-hat theory,⁷ partly because the argument against dualism is in principle the same as the *a priori* argument against any form of realism and requires prolonged research in the theory of meaning and conception,⁸ and partly because there is already current a mistaken belief that epistemological dualism has gained heavily by recent discussion.

The very backbone of the "revolt against dualism" is, as Mr. Lovejoy says, "the familiar Berkeleian and neo-realistic argument that if data were other than their *cognoscenda* the latter could never be known." Mr. Hoernlé thus avers that "the copy theory of knowledge" is "utterly incoherent and self-contradictory;" Mr. Joad that if "we can not know reality directly, . . . we can not know reality at

⁵ J. T. Barron, *Elements of Epistemology*, p. 158; J. B. Pratt, "The New Materialism," this JOURNAL, Vol. XIX (1922), p. 337. The italics, in both cases, are mine.

⁶ "The Innocence of the Given," *loc. cit.*, pp. 624-627; "On Having Ideas in the Head," this JOURNAL, Vol. XXIX (1932), pp. 617-631.

⁷ "On Having Ideas in the Head," *loc. cit.*

⁸ This topic is further pursued in "The Innocence of the Given," p. 621, and in "The *A Priori* Argument for Subjectivism," *The Monist*, Vol. XLIII (1933), esp. pp. 190-199.

all;" Mr. Dewey that it is an "insoluble problem . . . how a subjective experience can beget objective knowledge;" and Mr. Whitehead that without "an objective content, there can be no escape from a solipsist subjectivism."⁹ To oppose so much eminent opinion, it must suffice us to notice that the real source of the "solipsist subjectivism" is not the principle that the cognitive datum is not identical with the cognitive object, but the principle that there can be no knowledge unless the datum is identical with the object; and it is the latter principle which is false. It is incompatible, in the first place, with the discovery that the business of knowledge is not to contemplate or contain its object as a mirror reflects or contains a face, but rather to connect with and control its object as a gear meshes with a pinion or as a harness fits a horse. It is incompatible, in the second place, with the convictions even of the epistemological monists who use it. No serious philosopher dares deny that his immediate experience at any moment is an inconsiderable fraction of the world which he supposes he knows about. If Mr. Sellars, for example, could not, on the basis of *sensa* which occurred only under his hat, make inferences about, let us say, the outside of his hat, then the neo-realist could not, on the basis of *sensa* which occurred on the outside of Mr. Sellars's hat, make inferences, as he claims he can, about the inside of the hat. He would, indeed, as Mr. Lovejoy says, fall "into a more than Berkeleian subjectivism,"¹⁰ for the principal argument which the direct realist used against dualism is, ironically enough, the same argument which the execrated mentalist used against all realism. In the long run, no doubt, the most effective reply to the *a priori* argument against dualism will be the calm development, in the fashion of Mr. Brown and Mr. Sellars, of a positive dualistic theory. When the dualist has told how every iota of the experience which we *call* knowledge must result from the psychophysiological conditions asserted by his hypothesis, it will be obviously perverse to reiterate doggedly, "But your theory makes knowledge impossible." On the contrary, it makes knowledge inevitable. If it does not make it infallible, as is frequently complained, then so much the better for the theory, because, in point of empirical fact, knowledge is *not* infallible.

The theory of epistemological monism loses much of its lure when

⁹ A. O. Lovejoy, this JOURNAL, Vol. XXIX (1932), p. 348; R. F. A. Hoernlé, *Idealism as a Philosophy*, p. 65; C. E. M. Joad, *Introduction to Modern Philosophy*, p. 21; John Dewey, *Essays in Experimental Logic*, p. 71; A. N. Whitehead, *Process and Reality*, p. 231.

¹⁰ *The Revolt Against Dualism*, p. 50. Mr. Pratt argued similarly in *Essays in Critical Realism*. The fundamental importance of the point is somewhat obscured by Mr. Lovejoy's and Mr. Pratt's conclusion that all knowledge is an "anomaly."

we have noticed that the transcendence of the object would not make knowledge impossible, and that monism can not dispense with a transcendent object. On the other hand, monism has the advantage of embodying an ineradicable human prejudice, and the same principle which freed dualism of the charge that it can not account for true knowledge, frees monism of the charge that it can not account for erroneous opinion. "The argument from error" is too familiar to require enlargement. "If in perception the object is literally present," asks Mr. Rogers, "what sense attaches to the claim that some of our percepts are illusory?"¹¹ The question plainly assumes, I believe, that "literal presence" must constitute or suffice for true knowledge of what is present. This assumption is in the first place incompatible with our analysis of knowledge. It is, in the second place, no proper part of the monistic theory, which maintains, not, as Mr. Morris accuses neo-realism, that "givenness is as such knowledge," but only the quite different thesis that the *thing* which is given is customarily the thing which is also known.¹² (Conversely, our principle that "there is no immediate knowledge" means not, as is so easily supposed, that the object can not be immediately present in knowledge, but only that the knowledge of it does not consist in its immediate presence.) The assumption, in the third place, can be no proper part of any serious philosophical theory, for every philosopher must ultimately suppose it possible to be in error about what is given—a subject on which, as Bradley said, "there is no agreement, and little more than a variety of conflicting opinions."¹³ The epistemological dualist, to go no further, supposes that the *monist* is mistaken about the given.

Merely general stricture on the anti-monistic argument, however, requires the filling and effectiveness obtainable only from specific application to some popular varieties of the argument. These I shall speak of as the arguments from mistaken identification, from the temporal displacement of the datum, and from the spatial displacement. *Prima facie*, these by no means exhaust the list, but the solution of more titillating puzzles, that of the pink rats, for instance, must be left partly to the reader's ingenuity and partly to other occasions.

The argument from mistaken identification is the simplest. It supposes that an entity can not be consciously present without our knowing of *what kind* it is. A man in the dusky woods, it is ob-

¹¹ A. K. Rogers, in *Essays in Critical Realism*, p. 127.

¹² C. W. Morris, this JOURNAL, Vol. XXVIII (1931), p. 122. The distinction seems a treacherous one. Cp. C. I. Lewis, *Mind and the World-Order*, p. 135, and "Experience and Meaning," *Philosophical Review*, Vol. XLIII (1934), p. 135.

¹³ F. H. Bradley, *Essays on Truth and Reality*, p. 201.

jected, "sees a bear" where actually there is only a stump. The explanation is, of course, that although the monistic theory does require that in such circumstances the man is immediately aware of an object which is actually a stump, it does not require that the man be cognitively aware *that* the object is actually a stump. "Objects," Mr. Lewis reminds us, "do not classify themselves and come into experience with their tickets on them."¹⁴ If, as in this case, certain abstract elements of one object (the stump) are really similar to characteristic elements of another object (a bear), the monistic hypothesis implies that the givenness of the stump should sometimes instigate an interpretation-sequence appropriate to, that is, learned from or learned for, a bear.

The argument from mistaken identification is important because in its transparent simplicity it is the type of all the arguments from error. More impressive are the arguments from what Mr. Mackay has called "the displacement of the datum."¹⁵ These assume that if the cognitive object were consciously present, we must know *when* it is and *where* it is, or, conversely, that we do know just when and where are the data which *are* consciously present. With respect both to time and to space the arguments are of two varieties. The first asserts a disparity between the supposed location *with respect to one another* of the cognitive data and the location with respect to one another of the cognitive objects, and is exemplified by reference to the bent stick, the elliptical penny, the man behind the mirror, and the fact that, as Mr. Strong complains, "in the case of the stars . . . we perceive simultaneously events that are really years and even centuries apart."¹⁶ The second asserts a disparity between the location *with respect to the percipient organism* of the datum, and the location with respect to the organism of the object, and is exemplified by Mr. Pratt's conviction that a "whole series of physical and physiological processes . . . takes place between the stimulus-event and the percept," so that it is absurd to "identify this stimulus-event with the percept."¹⁷

For the problem of the supposed temporal displacement to be debatable at all, one must make certain assumptions: (1) there is a physical world-continuum in which every event is univocally located in three dimensions of space and one of time; (2) this continuum

¹⁴ C. I. Lewis, *op. cit.*, p. 88.

¹⁵ D. S. Mackay, this JOURNAL, Vol. XXIX (1932), p. 253. His theme is congenial: that it does not matter greatly *where* the datum is, since its use and not its locus makes it cognitive.

¹⁶ C. A. Strong, *Essays in Critical Realism*, p. 227.

¹⁷ J. B. Pratt, *Adventures in Philosophy and Religion*, p. 47. Examples could, of course, be multiplied indefinitely. They all impute to the new realist a psychological and physiological naïveté incommensurate with the actual history of his opinions.

admits of strict or Newtonian simultaneity; (3) there is a recognizable relation, which we can call experiential co-presence, among all the events given in what is ordinarily called a momentary field of consciousness; (4) there is a recognizable relation, which we can call psychophysical correlation, between any field of co-present experience and some moment of activity in a percipient organism which conditions the givenness of that experience.

Suppose now that at nine o'clock of a May night I am sitting on the porch and taking cognizance of the swaying blossoms of the wisteria and, in the remote reaches beyond, an eruption of incandescent hydrogen on Antares. By the usual assumption, which I shall not dispute, my cognitive *objects* (the real sway of blossoms and the real eruption) are not physically simultaneous with one another, but one antedates the other by many years. By hypothesis, on the other hand, my cognitive *data* (the blossom-sensum and the star-sensum) are experientially co-present with one another. These two propositions, we all know, the dualist believes to imply that the cognitive object and the datum have disparate temporal predicates and so, unless one event can occur at two times, to imply the falsity of the monist's belief that the datum is existentially identical with the object. On the contrary, I submit, when the argument is thus made explicit, it appears that the two propositions imply such conclusion only if conjoined with the further premise that *experiential co-presence implies physical simultaneity*, i.e., that all the elements of one conscious field have *eo ipso* the same date.

The other form of the time-lag argument relies on the fact that, by the usual assumption, the cognitive objects, in this case the blossoms and the eruption, are not physically simultaneous with the organic activity which conditions their perception, for they antedate that activity, one by a fraction of a second and the other by many years. By hypothesis, on the other hand, the cognitive data, the blossom-sensum and star-sensum, are psychophysically correlated with that activity. It is evident that the conjunction of these two propositions implies that object and datum have disparate temporal predicates if, and only if, they are further conjoined with the premise that psychophysical correlation implies physical simultaneity: in other words, that the date of the perceptum is *eo ipso* the date of the perceiving.

The proposition either that experiential co-presence or that psychophysical correlation implies physical simultaneity is a possible hypothesis, but the proof of either must depend upon a prior proof of epistemological dualism; the proof of dualism can not depend upon it. In the first place, neither proposition is tautologous or self-evident. We often mean by "now" a collection of events ex-

perientially co-present. We also often mean by "now" the collection of events operationally discerned to be physically simultaneous with a percipient activity. But that things which are "now" in one sense must be "now" in the other is a problematic material hypothesis.

In the second place, neither proposition, as a material hypothesis, is an implicate of the physical description of the four-dimensional continuum of nature, or of the definition (if there is any) of physical simultaneity. Astonishing as it may be, physical science and physical common sense have never been concerned to locate the consciously given, either in whole or in part, with respect to the space-time order. The hypotheses of the epistemologist need not in any case play second fiddle to those of physics or common sense, but in this respect, it happens, the stage is clear for them.

In the third place, the assumption of either proposition is specifically discouraged by our analysis of knowledge. The given is non-committal as to its location, if it has any, in the four-dimensional continuum. "It does not come with labels on it." Especially, it does not come with a *date-stamp* on it, like Chase and Sanborn's coffee.

There is no contradiction, therefore, either with itself or with the apparent facts, in the monistic hypothesis that the elements given to my consciousness, whether I perceive a star or recollect the scenes of my childhood, are literally occupants of point-events separated from each other and from the percipient activity by which I ordinarily date the "present," not only by many miles but also by many years. If the justification of the hypothesis seems to require sophisticated analysis, it must be remembered that the same analysis is requisite to the justification of its contrary. And if the decisions involved in it seem remote from common sense, it must be remembered that every epistemological theory must eventually explain how the experiential order does or does not link into the physical time-order, and that at this point any theory must transcend common sense.

The examination of the argument from the temporal displacement, which occurs in only one dimension, furnishes the paradigm of an analogous treatment of the less spectacular but much more difficult problem of the spatial displacement, which occurs in at least three dimensions. To name only two examples, it is argued, for instance, that a mirror-sensum and the face-sensum which is "behind" it, or the two stick-end sensa which are "displaced" with respect to one another (because the stick is half submerged in water), can not be respectively identical with the objects which they enable to be known, because the real face is not behind the real mirror, and be-

cause the real submerged stick-end is not displaced from the line of the unsubmerged stick-end. These arguments manifestly presuppose that detailed relations of experiential juxtaposition can be infallibly read off from the consciously present, and that all things thus found to be experientially juxtaposed in an order which we call, say, "*N*," must *ipso facto* be physically located in an order which we also call "*N*." Like the premises of the more special argument concerning the temporal displacement, this generalized premise is certainly not self-evident. We often mean by "straight," for instance, a certain abstract type of experiential juxtaposition, and we also often mean by "straight" an operationally defined set of physical locations. But that what is "straight" in one sense is necessarily "straight" in the other is not an *a priori* tautology, but a part of the material hypothesis whose truth we are questioning. Like our more special premise, also, this generalized premise is warranted neither by the scientific description of nature, which has rather less to say about the spatial than about the temporal correlation of the consciously given with the world-continuum, nor by our analysis of knowledge, which finds that the given is rather more inscrutable with respect to its place than with respect to its date—so inscrutable that the majority of philosophers still assert as a truism that it has no *place* at all.

The preceding discussion, as even the most sympathetic reader may surmise, has in one respect drastically simplified its problem. Granted that the apparent displacement of the datum can in principle be accounted for by the fact that it is possible to be in error about the constitution of the conscious content, surely there must be *something* to account for all men's erring, in the same special way, concerning such a thing, for instance, as the date of a star-gleam. I hasten to admit that there is something, and I name it, temeritously, "perspective." The constitution of the conscious field, being conditioned by a practical and local organism, must, on the monistic hypothesis, be a resultant of two components: it must be permeated by perspectival relations which cut across and are compounded with the relations which subsist among the same elements independently of their membership in the order of consciousness. Far from it being true of the neo-realist that, as Mr. Goudge has charged, "his premises prevent him from making Kant's important distinction between the objective and subjective succession of sensa,"¹⁸ he has made this the headstone of the corner, asserting

¹⁸ T. A. Goudge, *The Monist*, Vol. XLIV (1934), p. 115. Mr. Goudge, following Aaron, very properly insists "that sensing is *not* a form of knowing" (p. 120). Yet he argues against both monism and dualism, it seems to me, in the conventional ways which this principle invalidates, and finally espouses an extreme dualism, after all, in the apparent belief that if sensing is not knowing, then it must be impossible to sense what is known.

that *only* this difference of succession, context, selection, or perspective, distinguishes mental content from other things. Mr. Laird and Mr. McGilvary have recently explained, in ways which I should have thought only contumacy could resist, how the theory of direct realism distinguishes the order in which events are perceived from the order in which, as we ordinarily say, they "occurred."¹⁹ The events truly belong to both orders, but naturally we perceive them in the order in which they are perceived, and naturally, by reason of the inscrutability of the given, it may be a laborious enterprise to separate this transverse order from that of their occurrence in the cosmic continuum, especially since such duplicity of organization will result lavishly in what Mr. Pitkin (in *The New Realism*) called "projective indiscernibles." The properties of real perspectivity, exemplified either in the mistimed star or the misplaced stick-end, require study. They are not, however, a special liability of the monistic hypothesis, for the dualist must finally work out, on his small hypodermic scale, the same unfamiliar problems of experiential perspective which the monist tracks from galaxy to galaxy. Meantime, Mr. McGilvary's work in this direction seems to me superb and *bahnbrechend*, at once strengthening direct realism by developing its true implications, and beautifully clarifying such smudgy phrases as "relativity" and "perspective."²⁰

This discussion was intended to bring together epistemological notions not in themselves novel in such a way that they throw new light on each other. Both the critical realist and the neo-realist, for instance, have at times cited the judgmental component of perception to refute the criticism that their doctrines are incompatible, respectively, with true and with erroneous perception. Yet neither party, apparently, has appreciated the nature and identity of the two defenses, and each has continued to belabor the other with arguments

¹⁹ John Laird, "The Obsequies of Realism," *Philosophy*, Vol. VII (1932), esp. pp. 204-205. E. B. McGilvary, "A Tentative Realistic Metaphysics," *Contemporary American Philosophy*, Vol. II, pp. 109-132, and "Dialectical Arguments against Relative Simultaneity," this JOURNAL, Vol. XXVIII (1931), pp. 421-435. I confess to my shame that most of my essay was written, and read, while I was ignorant of the former work of Mr. McGilvary's. My distinction between experiential co-presence and physical simultaneity seems identical with his between perceptual and physical simultaneity, and at some other important points our expositions are, I think, very similar. Mr. Laird, on the other hand, makes more use than Mr. McGilvary of the principle that "direct apprehension" need not be "infallible apprehension."

²⁰ See especially his "Perceptual and Memory Perspectives," this JOURNAL, Vol. XXX (1933), pp. 309-330. His distinction between what the thing is *in* itself and what *by* itself, and his consequent doctrine that relative or perspectival characters are none the less *in* the object, and neither in the eye of the beholder nor gauged over the total situation, I hope will prove of epochal effect.

in violation of the principle on which his own philosophy depends.²¹ Our results, although nominally negative, are of affirmative effect. First, they would lift an apparent onus of self-refutation from metaphysical realism, which has been reducing itself to absurdity by claiming concurrently that dualism "makes knowledge impossible" and that monism is "exploded." Second, they suggest that if neither pure dialectic nor mere inspection of one's experience can ever disclose how the consciously given is related to the world of nature, we must pursue the question no longer in isolation, but as part of a scientific theory of reality, capable neither of demonstrative proof nor of demonstrative disproof, but chosen for its all-round inductive adequacy. Finally, they are an admonition to the idealists, pragmatists, and even naturalists who asseverate nowadays that their doctrine that mind and nature are one seamless cloth renders the epistemological problem otiose, either unnecessary or impossible. On the contrary, I think, it first makes the problem profitable. As for its necessity, to say that knowledge, like a thunder-storm, is a part of nature, is not to evade but to require its analysis and explanation. As for its possibility, on the other hand, I hope to have shown that the epistemologist is embarrassed, not by a dearth of solutions, but by a wealth of them. This, of course, is a real difficulty, but it has not been shown more than the scientific commonplace that any body of evidence is formally compatible with a plurality of hypotheses. There is a flavor of mere vengeance in calling a question "meaningless" or "unreal" because it is unanswerable, but it seems even less proper to call it "unanswerable" because, so far, it can be so adequately answered in so many different ways.

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BOOK REVIEWS

Geschichte der Philosophie in Einzeldarstellungen. Edited by GUSTAV KAFKA. 37 volumes.¹ Munich: Ernst Reinhardt. 1921-1933.

The series of volumes edited by Gustav Kafka and entitled *Geschichte der Philosophie in Einzeldarstellungen* deserves notice

²¹ Mr. Sellars, for instance (*op. cit.*), recognizes the innocence of the given and that it invalidates the familiar arguments against his epistemological dualism, but not that it equally invalidates his arguments against epistemological monism.

¹ No. 1. *Das Weltbild der Primitiven. Eine Untersuchung der Urformen weltanschaulichen Denkens bei Naturvölkern*: F. GRÄBNER (173 pp.); No. 1a. *Das Weltbild der Iranier*: O. G. v. WESENDONK (354 pp.); No. 2. *Indische Philosophie*: O. STRAUSS (286 pp.); No. 3. *Die Philosophie des Judentums*:

at least as a significant episode in the writing of the history of philosophy. No attempt of like proportions has ever been made, and yet the size of the undertaking is by no means its chief distinction. Its scope and method also indicate an advance toward a more adequate history of philosophy. The series is, for one thing, a collective work to which twenty-six scholars have contributed, and one which bears witness to a remarkable community of understanding. The history of philosophy is not viewed here from the vantage point of individual erudition and insight, but from a common plateau to which German critical scholarship has attained. It is true there is a defect involved; some of the volumes almost seem written according to a standard recipe. Interpretive genius is often missing; but, on the other hand, there is unwonted comprehensiveness and objectivity toward all but the most recent period.

As to the common understanding pervading the series, two traits which apparently have been guiding principles of interpretation deserve special notice. First, the systems of philosophy described are related to the broader movements of thought and culture in which they participated; and secondly, the intellectual biography of individual philosophers is given fuller attention than in most academic histories of philosophy. These two traits may seem to contradict each other, for it is difficult to do justice both to gen-

J. GUTTMANN (412 pp.); No. 4. *Die Philosophie des Islam in ihren Beziehungen zu den philosophischen Weltanschauungen des westlichen Orients*: MAX HORTEN (385 pp.); No. 5. *Chinesische Philosophie*: H. HACKMANN (406 pp.); No. 6. *Die Vorsokratiker*: GUSTAV KAFKA (164 pp.); No. 7. *Sokrates, Platon u. der Sokratische Kreis*: GUSTAV KAFKA (154 pp.); No. 8. *Aristoteles*: GUSTAV KAFKA (203 pp.); No. 9. *Der Ausklang der Antiken Philosophie und das Erwachen einer neuen Zeit*: GUSTAV KAFKA und HANS EIBL (381 pp.); Nos. 10-11. *Augustin und die Patristik*: HANS EIBL (462 pp.); Nos. 12-13. *Thomas von Aquin und die Scholastik*: PAUL SIMON (in preparation); No. 14. *Die Philosophische Mystik des Mittelalters*: JOSEPH BERNHART (291 pp.); No. 15. *Die Philosophie der Renaissance*: AUG. RIEKEL (193 pp.); Nos. 16-17. *Descartes und die Fortbildung der kartesischen Schule*: BARON CAY VON BROCKDORFF (227 pp.); No. 18. *Spinoza*: BERNHARD ALEXANDER (179 pp.); No. 19. *Leibniz*: GERHARD STAMMLER (183 pp.); No. 20. *Bacon und die Naturphilosophie*: WALTER FROST (504 pp.); No. 21. *Hobbes und die Staatsphilosophie*: RICHARD HÖNIGSWALD (207 pp.); Nos. 22-23. *Locke, Berkeley, Hume*: ROB. REININGER (213 pp.); No. 24. *Die Englische Aufklärungsphilosophie*: BARON CAY V. BROCKDORFF (180 pp.); No. 25. *Die Französische Aufklärungsphilosophie*: O. EWALD (168 pp.); No. 26. *Die Deutsche Aufklärungsphilosophie*: BARON CAY V. BROCKDORFF (180 pp.); Nos. 27-28. *Kant. Seine Anhänger und seine Gegner*: R. REININGER (313 pp.); No. 29. *Fichte*: HEINZ HEIMSOETH (223 pp.); Nos. 30-31. *Schelling und die romantische Schule*: H. KNITTERMEYER (482 pp.); Nos. 32-33. *Hegel und die Hegelsche Schule*: W. MOOG (491 pp.); No. 34. *Schopenhauer*: HEINR. HASSE (516 pp.); No. 35. *Herbart und seine Schule*: G. WEISS (262 pp.); No. 36. *Fechner und Lotze*: MAX WENTSCHER (207 pp.); No. 37. *Nietzsche*: AUGUST VETTER (328 pp.).

eral cultural tradition and to the energies of the individual thinker in a single narrative. The editor has met this problem in an ingenious way: a number of the volumes are devoted to various cultural movements and traditions as such, for example, No. 9 to the closing period of ancient philosophy, No. 14 to the philosophic mysticism of the middle ages, No. 15 to the philosophy of the Renaissance, Nos. 24, 25, and 26 to the Enlightenment in England, France, and Germany, respectively. Other numbers, however, are each devoted to a classic philosopher, and in these the portraiture of an individual mind occupies the central position, surrounded nevertheless in most cases by an account of the sphere in which that mind was influential. Titles like *Augustin und die Patristik*, *Bacon und die Naturphilosophie*, *Hobbes und die Staatsphilosophie* are illustrative of this type. Thus, the different numbers supplement each other very genuinely, and though the series is called a history of philosophy in *Einzel-darstellungen*, the reader will miss one of its chief values if he treats its volumes merely as such.

In the main it is still the history of European philosophy which is again presented under the comprehensive title of *Geschichte der Philosophie*, but the first six volumes take a most welcome step in expanding the horizon. They are devoted respectively to: 1. The world-view of primitive peoples, discussed by F. Gräbner, 1a. The world-view of the Iranians, by O. G. v. Wesendonk, 2. Indian Philosophy, by O. Strauss, 3. Philosophy of Judaism, by J. Guttman, 4. Philosophy of Islam, by Max Horten, and 5. Chinese Philosophy, by H. Hackmann. It will be seen that eminent authorities have been secured for these unusual volumes.

Under the title *Das Weltbild der Primitiven* Professor Fritz Gräbner undertakes to investigate "die Urformen weltanschaulichen Denkens bei Naturvölkern." His treatment appears on the surface to be much too schematic to do justice to his varied subject-matter. His ethnological identifications of magic with the crudest cultures, of animism with agricultural and matrilinear cultures, of *Persönlichkeitsweltanschauung* with totemistic and patri-linear cultures, and finally of the higher cultures with the process of culture diffusion (or intermixture of lower cultures) are too neat to be convincing. However, the reader soon discovers that Professor Gräbner is aware of the difficulties in making such generalizations and even describes many of the primitive traits which do not fit into his scheme of classification. In opposition to Lévy-Bruhl and others, he defends causality as a category of primitive thought, and links it directly with the principles of association. He believes that the idea of substance is foreign to most primitive thought, though his evidence on this point is far from clear. A suggestive but exag-

gerated contrast is sketched between the temporal and the spatial types of primitive *Weltbild*. In this and other connections one may feel that interests of contemporary German philosophy are being read into the subject-matter, and the author's own *Weltbild* comes to the fore, when he draws the following conclusion from his survey, especially from his analysis of the effects of language structures on philosophic thought: "The development of philosophy is generally recognized to be in large part the work of the Indogermans. But this is made possible by a peculiar mental capacity, namely, the ability to see the things of the world from various points of view. For the problem, the foundation of all philosophizing, arises from this capacity; and for the grasping of problems the Indogerman was incomparably better prepared by his language habits than were other peoples" (p. 93).

The treatment of *Das Weltbild der Iranier* by Dr. O. G. v. Wesendonk has been given the number 1a, no doubt because, as the author points out, "Iran never gave rise to systematic philosophy in the times before Islam." The first three chapters are devoted to the problem of interpreting the rise of the Zoroastrian religion in its cultural context, while seven subsequent chapters discuss with admirable critical care the development of this religion, its practical and theoretic transformations, and its extensive influence upon many cultures through not only the Medes and Persians, but also the Hindus, Scythians, Greeks, Jews, Parthians, and then the Mithraists, Christians, Manichaeans, and Mohammedans. An excellent critical bibliography is included, so that the volume may serve as a handy introduction to a wide and relatively little-known province of cultural history.

The second volume, on Indian Philosophy, by Professor O. Strauss, though offering little new, is a thoroughly useful and competent compendium. It is admirably direct and specific in concisely epitomizing much of the available literature. The same qualities in a measure also characterize the third volume, on the Philosophy of Judaism, by Professor J. Guttman. It is a somewhat formal, but closely written, compact digest of systematic Judaic philosophies. After a brief introductory consideration of the Hellenistic period, the Talmudic background, and Islamic influence, the main narrative begins with Sa'adia. The more mystical aspects of both the medieval and the modern periods seem to be slighted. Sixty pages are devoted to the time since Moses Mendelssohn, ending with a fifteen-page account of Hermann Cohen, but without mention of Chassidic tendencies such as find expression in the thought of a man like Martin Buber.

The Philosophy of Islam is presented in Volume 4 by Professor

Max Horten; it is a compact volume which might be viewed as an effort toward synthesizing the voluminous contributions of the author to the study of Mohammedan philosophy. The work covers not only what is commonly referred to as "Arabic philosophy," but the philosophic work of the oriental Mohammedans as well, Persian and Indian. Professor Horten has not attempted to treat this mass of material in chronological order, but rather as a series of problems; within the frame of these problems he occasionally traces historical evolutions. The tendency, however, is to emphasize a fundamental unity of Islamic thought: the heritage of Greek thought was transformed by the Mohammedans, the so-called Aristotelians being in reality Neoplatonists, and the Platonists bearing at best only a resemblance to the Islamic philosophers who completely transformed the material derived from their Greek predecessors; and in turn the influence of Arabic thought on Christian thought as seen in the Latin Averroists is in terms and discussions which are not germane to the original philosophy. Systems and world-pictures occupy the center of Dr. Horten's discussion, with the result that the reader will frequently have difficulty disengaging the ideas proper to any particular philosopher, and he will find some problems which were investigated in detail by the philosophers of the eleventh and twelfth centuries barely mentioned, such as the topics proper to Aristotle's physics. Professor Horten's work is none the less a clear and concise treatment of an enormous field.

Professor H. Hackmann, who writes the volume on Chinese Philosophy, is the author of several excellent works on Buddhism, and the present volume is distinguished by the unusually full and informed section devoted to the philosophical history and literature of Chinese Buddhism. In view of the fact that the series as a whole stresses the modern period in treating European philosophy, it is to be regretted that this particular volume on China virtually ends with the thought of Wang Yang Ming, and devotes a scant two pages to intellectual activity since the sixteenth century, which if less original philosophically, has been so important for the contemporary critical estimate of ancient Chinese thought and culture. It is a rather one-sided and, on the whole, a rather conventional view of Chinese thought that is offered here.

The four volumes on Greek philosophy contributed by the general editor himself, Gustav Kafka (the last in collaboration with Hans Eibl), seem the most conventional and least inspired in the series. There is no gesture away from this well-ploughed field of German erudition; the crop is familiar, mediocre, and tasteless. Kafka follows "the clarity of the historical tradition" in *Die Vorsokratiker*, with no suspicion of shadows and pitfalls. With Rein-

hardt, he takes Parmenides' Way of Error as the Eleatic physics, in contrast to his metaphysics. The treatment of Plato runs *Ideenlehre, Sittenlehre, Götterlehre, Staatslehre, Seelenlehre, Naturlehre*; there is no indication that Plato wrote dialogues and not *Lehren*. Aristotle fares rather better: Kafka is appreciative as well as scholarly. The emphasis is suggested by the twelve pages devoted to the metaphysics, the twenty-seven to the *Naturphilosophie*, and the fifty-nine to the ethics and politics. The logic is prefaced by a long discussion of Aristotle's *Erkenntnistheorie*, and much is made of his "recognition of the ideality of time." The *De Anima* is treated almost entirely in terms of the immortality of *nous*. The last volume, *Der Ausklang der antiken Philosophie und das Erwachen einer neuen Zeit*,² is heavily weighted on the second of its topics. Philo receives thirty-four pages, and Neoplatonic theology thirty-three. Incidentally, the only non-German reference in the four volumes is to Paul Elmer More.

In *Augustin und die Patristik*, Volumes 10 and 11, Professor Hans Eibl, prefacing his discussion by arguing that theology is a form of philosophy, presents the evolution of Christian thought from Paul to the fifth century. His thesis permits Dr. Eibl not only to bring out the philosophic aspect of much that has been treated as purely theological in the discussions of God, the trinity, the soul, creation, but also to state the contribution of that theological method to questions more usually recognized as philosophic, such as the problems of methodology in general, of time, and of history. As bearing on these latter questions, the chapter on Saint Augustine himself is particularly good, but the chief contribution of the volume lies in the fact that it contains some treatment, however brief, of all the numerous important figures, Greek and Latin, of patristic times, and the processes of influence and reaction become apparent to the reader as he passes from philosopher to philosopher.

Volumes 12 and 13 on *Thomas von Aquin und die Scholastik*, announced for the autumn of 1933, have not yet reached the reviewer.

Volume 14 by Dr. Joseph Bernhart carefully analyzes the ideology of philosophic mysticism in the middle ages, traces its derivation from ancient sources at some length, and then undertakes to distinguish the several contributions of medieval authors and schools to mystic tradition. Among the many individual characterizations those of Bernard, Ramon Lull, Eckhart, and Nicolaus Cusanus stand out as particularly full and illuminating. The book offers more perhaps as an interesting survey of many factors in medieval thought

² This volume was reviewed in this JOURNAL by Henry F. Mins, Jr., Volume XXVII (1930), pp. 79-82.

than as an interpretation of mysticism. But no doubt it is wise in refusing to isolate the latter phenomenon.

The remaining twenty-three volumes are all devoted to European philosophy since the Renaissance. This emphasis on modernity appears to some degree in the up-to-date temper of the treatments as well as in the space allotted.

Professor Bernhard Alexander's treatment of Spinoza in Volume 18 opens with a sketch of his life, and thereafter follows systematically the historical sequence of his works, expounding them point by point in the order Spinoza followed in each. It is a clear exposition, interrupted from time to time by a digression on the history of the problem under discussion.

Walter Frost's volume on *Bacon und die Naturphilosophie*, No. 20, is fortunately on a much more extensive scale than the rest, for it is probably the outstanding work in the series. There is room in over two hundred pages on the new science for a careful study of the century of genius, refreshingly free from the time-honored legends. Frost has read the pathfinders in their own terms, not at all in the origins of their thought in the late middle ages; he gives no reference to Duhem. But he has read them carefully. The emergence of natural science in the sixteenth century he regards as primarily an inner development of mathematical thought on the one hand, and of the technical and experimental spirit on the other. He recognizes, however, the influence of ancient thought, especially of the reconstruction of Aristotle's logic into a scientific rather than a dialectical instrument. Even in experimentalists like Galileo he emphasizes the importance of *a priori* assumptions. In writing of Bacon himself he is competent and just, taking a middle of the road position on controversial points. Science progressed in spite of Bacon, not because of him, and Bacon was primarily a great propagandist and advocate; yet his method was an interesting first attempt.

Volume 21 by Richard Hönigswald on *Hobbes und die Staatsphilosophie* is also excellent. It projects Hobbes not against the usual background of Francis Bacon and British empiricism, but against Galileo and the current enthusiasm for applying geometrical analysis to all subject-matters. The exposition of how Hobbes attempted to analyze human relationship by applying the principles of the motions of "bodies" is highly illuminating, and incidentally corrects the traditional expositions of Hobbes' supposed "materialism."

Volumes 22 and 23 on Locke, Berkeley, and Hume are less stimulating. The treatment given these men is quite conventional. In fact the very cursory survey of the English Enlightenment, Volume 24, by Baron Cay v. Brockdorff throws more light on the environments, motivations, and problems of these three men. The same comment

holds true of this writer's volume on the German Enlightenment by comparison with the relatively conventional treatment of individual German thinkers. Moreover, both of Brockdorff's volumes are much superior in organization of material and freshness of thought to Oskar Ewald's treatment of the French Enlightenment. Ewald shows little sense of the controlling influence of the scientific ideal, and adopts a very Teutonic and condescending attitude toward what he calls this "*Weltansicht von unten*."

It can not be said that the volumes devoted to classic German philosophers depart from the traditional German estimate which sets Immanuel Kant as the central figure in modern philosophy, if not of philosophy in general. But within the frame of this attitude an important shift of emphasis may be discerned. There is much less attention to the elaborate dialectic with which the case for idealism was argued than there used to be, and instead there is much more factual delineation of the human orientation and of the positions taken by each of the German thinkers in various specific matters. In fact, it is altogether less evident that the main appeal and virtue of these thinkers lies in their old-fashioned systems of idealism. The writer on Schelling notes that the "realistic tendency which repeatedly breaks through in Schelling's philosophy of nature undoubtedly is congenial to the demand for reality, which leads today to the critique of idealism." It would be misleading, however, to say that the appraisals indicate a swing from idealism to realism. Fortunately the trend of present German thought can not be summed up with such shop-worn labels. Leibniz is praised not so much for his idealism as for his many-sidedness, far-reaching ideas, and even for a lack of specialism and system. Fichte is esteemed for the qualities of power and command which his thought expresses. Of Kant it is noted that "he unites the daring enunciation of new problems with their carefully weighed solution."

In such simple and altogether human eulogies one can not help sensing a certain swing away from the mazes of traditional academic theorizing to a more universal region of perception and understanding. One finds, to be sure, much traditionalism, and yet also a note of fresh challenge in such a statement as the following from the volume on Kant: "The final, conclusive consequences have not yet been drawn from Kant's Copernican revolution. . . . Old Kant stands to this very day as the incorruptible and unshakable guardian of the narrow division which separates genuine philosophy from naturalism lacking in ideas, on the one hand, and from dreary 'Schwärmgeisterei' on the other" (p. 297).

Two double volumes particularly useful in their fullness are Nos. 30-31 by Dr. H. Knittermeyer on Schelling and the romantic school, and Nos. 32-33 by Professor W. Moog on Hegel and the Hegelian

school.³ Here we have in each case besides a very readable and discerning epitome of what Schelling and Hegel wrote at successive stages of their development, a connected account of the vicissitudes of their ideas in the spheres of their immediate influence. Important work has been done in Germany during the last twenty-five years on the growth of Hegel's thought, and some also on Schelling and his circle. These volumes are conversant with the results.

It was a welcome thought to include accounts of Herbart, Fechner, and Lotze in the series. Both Volume 35 on Herbart and his school, and Volume 36 on Fechner and Lotze give much more adequate information about these thinkers than is readily available in the usual histories. The interpretations and the manner of presentation, however, are rather stereotyped in both cases, and the same can be said of Volume 34 on Schopenhauer. All three of these volumes stick very closely to the letter of their respective subjects. From the character of the series as a whole one might have expected a fuller use of the opportunity presented in treating these men to give some idea of the general movement and tenor of German philosophy after Hegel.

The account of Nietzsche by August Vetter (No. 37) has more life, and at least makes an attempt, if a restricted one, to use its opportunities in this respect. After a well-connected exposition, tracing the course of Nietzsche's thought in the main themes of his writings, the author undertakes at the close to define Nietzsche's significance in the development of modern philosophy. Kant, he says, had put forth the idea of autonomy in both the theoretic and practical spheres. In the field of theoretic understanding, however, he left reason in touch with the sense world, but in the practical sphere he retreated from this, and left the autonomy of the will an empty form. It was Nietzsche who undertook to develop the idea of volitional autonomy, not in a vacant transcendental realm, but in the thick of actualities. The free and good will must be a powerful will. On such ground moral philosophy encounters real issues and becomes vital again.

It was announced that the last three volumes of the series would be devoted to nineteenth-century materialism, Comte and positivism, Mill and empiricism, but in the final lists these titles do not appear. Their withdrawal is unfortunate. To devote the last ten volumes on the history of philosophy to the German "supermen" of the nineteenth century is no doubt gratifying to national feeling, but it fails not only to do justice to the thought of the last century, but also to lead up adequately to contemporary philosophical interests and tendencies.

³ The latter have been separately reviewed by Professor Sidney Hook. See this *JOURNAL*, Vol. XXVIII (1931), pp. 497-500.

The well-chosen format of the series deserves to be mentioned. The volumes are of moderate dimensions, very compact and admirably provided with useful bibliographical references. They vary from an average of two hundred and fifty pages to a few double volumes of about five hundred pages in thickness, and from two seventy to ten marks in price. Roman type and attractively fresh bindings of a natural linen tone are used.

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Les Ages de l'Intelligence. LÉON BRUNSCHVIG. (Nouvelle Encyclopédie Philosophique, 1.) Paris: Félix Alcan. 1934. 150 pp. 10 francs.

In a series of six lectures given at the Sorbonne in 1932-1933, M. Brunschvig attempts to reorient the thought of the younger generation towards a goal which is neither that of to-day nor that of yesterday. The present reviewer can not but feel that he is right in urging his students not to seek a solution of our problems in formulas which were devised for what were after all radically different times. But he is not sure that M. Brunschvig's method would be very illuminating to people who did not already know what ends they were seeking. These lectures are so general—it might be better to say “abstract”—that they deal only with the technique of thinking, and the particular technique which M. Brunschvig appears to believe characteristic of our age and of the mature intellect and *therefore* the best is the “functionalistic” technique of contemporary physics. This is his contribution to the criticism of the “subject-attribute logic” and, though what he says is somewhat—but not entirely—weakened by reliance on the metaphor of growth and maturity, it is a contribution worthy of diligent reflection. Since, however, our problem is not only how to reach conclusions, but what conclusions to reach—for no logic can by itself tell us from what premises to start—M. Brunschvig has only begun to help us. This does not mean that his warnings are not well taken, but only that they are not sufficient for what one gathers to be his purpose.

G. B.

OTHER NEW BOOKS AND JOURNALS

THE MONIST. Vol. XLIV, No. 2. The Intelligibility of Sensations: Charles Hartshorne. The Argument for Realism: D. C. Williams. The Logic of Morris R. Cohen: Homer H. Dubs. The Operational Test of Meaninglessness: R. H. Dotterer. Reality and

"The Real" in Bradley: *Rudolf Kagey*. Are Particulars Constituents of Propositions? *Lucius Garvin*. The Universal-Particular Situation in Sculpture and Poetry: *M. Whitcomb Hess*. Objectivity and Change in Moral Values: *G. H. Langley*. The Problem of Evil in the Philosophy of Jonathan Edwards: *Rufus Suter*. Meyerson and the Epistemological Paradox: *Thomas R. Kelly*. Discussion—Note on Reflexive Relations: *A. Ushenko*.

MIND. Vol. XLIII, No. 171. Indication, Classes, Numbers, Validation: *A. N. Whitehead*. The Given: *J. Laird*. A Last Plea for Free-thinking in Logistics: *H. W. B. Joseph*. Nature in the Philosophy of Bosanquet: *R. E. Stedman*. Demonstration of the Impossibility of Metaphysics: *A. J. Ayer*. Discussions—On the Use of "Universe": *L. S. Feuer*. Mr. Stace's "Refutation of Realism": *R. E. Stedman* and *H. B. Acton*. A Reply to Mr. Stace's "Refutation of Realism": *V. C. Aldrich*. Mr. Stace's "Refutation of Realism": *D. C. Williams*.

PHILOSOPHY. Volume IX, No. 35. The Present Need of a Philosophy: *Letters to the Editor*. Truth and Modern Dictatorship: *I. Donsky*. Great Thinkers (II): Plato: *G. C. Field*. Change: *G. R. G. Mure*. The Psychology of Ethical Empiricism: *A. C. Fox*. Causality: *Y. H. Krikorian*. The Categorical Imperative and the Golden Rule: *E. W. Hirst*. The Hegelian Absolute and the Individual: *P. T. Raju*.

NEW SCHOLASTICISM. Volume VIII, No. 3. Scholasticism and the Kantian Aesthetic: *Albert W. Levi*. A Critique of Kantian Autonomy: *Arthur E. Gleason*. Thomistic Metaphysics: A Systematic Explanation of the Real: *Francis E. McMahon*.

NOTES AND NEWS

The next two issues of this JOURNAL (nos. 17 and 18, dated August 16 and 30) will be published as a double number and will contain a bibliography of the scholarly philosophical literature published in English, French, German, and Italian during the year 1933. As announced earlier in the year, this bibliography will hereafter be an annual feature of the JOURNAL, its purpose being to supplement the Bibliography of Philosophy now in preparation under the auspices of the American Philosophical Association for the years 1902-1932. The price of this double number will be one dollar if sold separately, but the regular subscription price of the JOURNAL (\$4.00 a year) is unchanged. New subscriptions may be entered to start with this double number.

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Abstracts of Papers Read at the Thirty-fifth Annual Meeting of the Western Division of the American Philosophical Association, Indiana University, March 29–31, 1934.

Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 11. May 24, 1934.

Whitehead, Descartes, and the Bifurcation of Nature. ALBERT G. A. BALZ.

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Volume XXXI. No. 12. June 7, 1934.

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Volume XXXI. No. 13. June 21, 1934.

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Volume XXXI. No. 14. July 5, 1934.

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The Realism of Common Sense. DANIEL CORY.

Some Recent German Critics of Phenomenology. ANDREW D. OSBORN.

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Volume XXXI. No. 15. July 19, 1934.

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Studies in the History of Ideas. Vol. III. Edited by the Department of Philosophy of Columbia University. (Columbia University Press.) 500 pp. \$3.50. Contents: John Dewey: *An Empirical Survey of Empiricisms*; M. T. McClure: *Greek Genius and Race Mixture*; Richard McKeon: *Renaissance and Method in Philosophy*; A. G. A. Balz: *Cartesian Doctrine and the Animal Soul*; S. P. Lamprecht: *The Role of Descartes in Seventeenth Century England*; F. J. E. Woodbridge: *Locke's Essay*; Howard Selsam: *Spinoza; Art and the Geometric Method*; J. T. Baker: *The Emergence of Space and Time in English Philosophy*; Rudolph Kagey: *Coleridge*; Sidney Hook: *Hegel and Marx*; H. W. Schneider: *Mill's Methods and Formal Logic*; Ernest Nagel: *Impossible Numbers; a Chapter in the History of Modern Logic*; Gail Kennedy: *The Pragmatic Naturalism of Chauncey Wright*.

Aristotle's Theory of the Infinite by A. Edel.

(Handwritten signature)

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THIS bibliography is intended to include all the scholarly philosophical literature published during the year 1933 in English, French, German, and Italian. No attempt has been made to cover literature in other languages, though several such items have been included. Accurate information on a few titles published in 1933 is not available at this date. Such items will be included in the bibliography for 1934. Not all the articles published in the periodicals here listed have been included. Reviews have been excluded, as well as translations of works from one of the four above-mentioned languages into another of them. New editions have been included only when they are extensive revisions or enlargements.

The classification according to subject-matter is indicated by the various headings. Minor divisions are sometimes indicated merely by a blank space, in cases where the titles themselves reveal the nature of the subject-matter better than formal headings.

The editors and compilers would appreciate the coöperation of publishers, authors, and readers in supplying titles missing in this issue and data for the issue of 1934.

The editors of the JOURNAL OF PHILOSOPHY wish to express their appreciation to those whose generous expenditures of time and labor have made this bibliography possible, especially to Carol S. Schneider, who compiled and edited it; to W. A. Hammond of the Library of Congress; to Emerson Buchanan, who is engaged on a bibliography of philosophy for the years 1902-1932, and whose counsel in the task of classification has been invaluable; to Isadore G. Mudge, Elizabeth Ford, and other members of the Columbia University Library staff, whose services and guidance have enhanced the accuracy and value of the work.

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KEY TO ABBREVIATIONS FOR PERIODICALS

(The numeral following the title of the periodical is the number of the volume for 1933.)

- Am J Ps = American journal of psychology. 45. Cornell Univ. Ithaca, N. Y.
- Am Scholar = The American scholar. 2. United chapters of Phi Beta Kappa, N. Y.
- Analysis = Analysis. 1. Oxford.
- Arch de Ph = Archives de philosophie. 10. Paris, Beauchesne.
- Arch Fil = Archivio di filosofia. Organo della Società filosofica italiana. 3. Roma.
- Arch Hist Doctr Litt M A = Archives d'histoire doctrinale et littéraire du moyen âge. Dirigées par Ét. Gilson et G. Théry. 7 (année 1932), 8 ('33). Paris, Vrin.
- Arch Ph du Droit Soc Jur = Archives de philosophie du droit et de sociologie juridique. 3. Paris, Recueil Sirey.
- Arch Rechts Soz Ph = Archiv für rechts- und sozialphilosophie. 27. Berlin & Lpz., Rothschild.
- Arch Storia Fil = Archivio di storia della filosofia. Organo della Società filosofica italiana. 2. Roma.
- Aristot Soc Proc = Proceedings of the Aristotelian society for the systematic study of philosophy, 1932-1933. New series 33. Lond., Harrison, '33. 354 p.
- Australasian J Ps Ph = The Australasian journal of psychology and philosophy. 11. Sydney.
- Bl Deutsche Ph = Blätter für deutsche philosophie. (Deutsche philosophische gesellschaft.) 7. Berlin.
- Brit J Ps = The British journal of psychology. General section. 23, 24. Lond., Cambridge Univ. Press.
- Bul Soc Fr Ph = Bulletin de la société française de philosophie. 33. Paris, Colin.
- Calcutta R = The Calcutta review. Series 3, 46, 47, 48. Calcutta.
- Gi Tom = La Ciencia tomista. Publicación bimestral de los Dominicos Españoles. Año xxv. 47, 48. Salamanca.
- Criterion = Criterion. Revista trimestral de filosofía. 9. Barcelona.
- Critica = La Critica. Rivista di letteratura, storia e filosofia. 31. Napoli. Bari, Laterza.
- Divus Th = Divus Thomas; jahrbuch für philosophie und spekulative theologie. Series 3, 11. Freiburg.
- D Vjsch Lit-wiss Geistesg = Deutsche vierteljahrsschrift für literaturwissenschaft und geistesgeschichte. 11. Tübingen & Bonn. Halle, Niemeyer.
- Erkenntnis = Erkenntnis. (Gesellschaft für empirische philosophie, Berlin, und Verein Ernst Mach, Wien.) 3. Lpz., Meiner.
- Et Franc = Études franciscaines. Revue mensuelle. 35. Paris.
- Et Ph = Les Études philosophiques. Organe officiel de la Société d'études philosophiques. 7. Marseille.
- Giorn Crit Fil Ital = Giornale critica della filosofia italiana. 14. Firenze, Sansoni.
- Gregorianum = "Gregorianum." Commentarii de re theologica et philosophica. 15. Romae, Pontificia Universitate Gregoriana.
- Harv Theol R = The Harvard theological review. 26. Cambridge, Mass., Harvard Univ. Press.
- Hib J = The Hibbert journal. A quarterly review of religion, theology and philosophy. 31. Lond.
- Int J Eth = The International journal of ethics. 44. Chicago, Univ. of Chicago Press.
- J Ph = The Journal of philosophy. 30. Columbia Univ. N. Y.
- J Rel = The Journal of religion. 13. Chicago, Univ. of Chicago Press.
- Kantstud = Kant-studien. Philosophische zeitschrift. Organ der Kant-gesellschaft. Halle. 38. Berlin.
- Logos = Logos. Internationale zeitschrift für philosophie der kultur. 22. Tübingen, Mohr.
- Logos (Palermo) = Logos. Organo della Biblioteca filosofica di Palermo. 16. Napoli, Perrella.
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- Mod Schoolman = The Modern schoolman. A quarterly journal of philosophy. 10. Saint Louis Univ., Saint Louis.

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VII

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THE JOURNAL OF PHILOSOPHY

THE MATERIAL WORLD

VERY likely the term "matter" has no longer much significance in scientific usage, although it is still found in elementary physics textbooks, and frequently graces book and chapter headings. Even so, I have no desire to rescue a concept which may have become a convenient waste basket for the refuse of outworn notions. To avoid this misappropriation of a very necessary receptacle, I will not take the position of urging any acceptable redefinition or rehabilitation of the term, but rather will attempt some description of the change that has taken place in the function that the term has served. My general aim is to reenact an oft-repeated process, namely, the restatement of certain specific changes in a way that has wider significance, which may, therefore, lead to a better understanding.

In ordinary life we mean by material things, I suppose, the kind of things that we can get our hands on. This has implications to which I will return later. For the moment, let us but note that ordinarily actions and causal changes are related to this kind of things. Correspondingly, in the world of physics, some feel a difficulty in the assertion that there are waves, for example, without saying that there are waves of *something*. Various words have satisfied this feeling. Without being prejudiced by these suppositions or by any others, so far as we can help ourselves, let us see what it means, in ordinary language, to assert the existence of something material.

The primary significance of the statement "there is an x " is an identification of an object. I am describing the relations of the statement to the situation in which it occurs rather than the formal logical properties of the proposition. On the more ordinary occasions of the statement, the word "there" points to a thing present to the organism, about which meanings are expressed or indicated by the predicate which I have indicated in " x ." This usage is primary because, however mistaken we may be when we attribute certain meanings to the thing pointed out by "there," the thing itself is present and hence unquestionable. It is not hypothetical, however questionable "what it is" may be.

A second degree removed is the use of the statement "there is

an x " in an indirect manner, i.e., when the thing is not present, but would be present under certain circumstances. "There is a table in the next room" means in all common sense that if we were in the other room, etc., etc., we would perceive a table. The speaker assumes a perspective involving a table being present. The psychological mechanism of this assumption of a different perspective is a social phenomenon, I suppose, for it only occurs in a socialized individual. That, however, is irrelevant to our purpose except for a brief mention later on. Involved in the assumed perspective is an identification of a thing present as a focus of meanings.

Perhaps in a naïve sense, something of this second-degree use of the statement "there is an x " quite frequently enters into the meaning of such statements as "there are atoms" or "there are electrons," particularly when emphasis is placed on pictures or models. If we could see finely enough we would see something like the picture or model. I need not go into detail to point out that the ordinary theory of the atom would immediately offer difficulties to such a statement. It would, for example, preclude in that instance the usual account of seeing by reflected light, and even aside from that difficulty it would imply that electrons could only be seen when they didn't exist. In short, the statement is too preposterous to merit extended analysis. To be sure, there are perceptual phenomena on which meanings are focused, as when the physicist photographs an ionized "track of a particle" in a gas or liquid, or observes the saltatory motion of a minute globule of oil between two electrodes. But the fact still remains that these perceptual phenomena are not in any ordinary sense the things in question. Again, one may permit his imagination to enlarge on the possibilities of the television-microscope, but however amazing and unforeseen the results may be they will be irrelevant to our problem.

The fact is that in his busier moments, no one seems bothered about any perceptual or sensory properties of the atom. A black and white band of well-differentiated spectral lines is more useful than the brilliant hues of the rainbow. Violet and red designate frequencies rather than colors. The birth cries of atoms shriek in the ears of the physicist only in his more mystic, or more journalistic, moments. In their silent and invisible depths they pursue their way as untouched by the feelings of observers as the pre-Cambrian heavens. It is a blind man's world. It is a deaf man's world. Perchance it is a dead man's world.

The so-called secondary or consummatory qualities have never been essential characteristics of matter from Democritus until to-day. Similarly, if we return to our primary meaning of the statement "there is an x ," we would see that the perceptual is not the central

point of the situation. It is rather the occasion or the stimulus of the problem. The ordinary man thinks he is getting down to reality when he has something tangible—when he can get a hold on something. The common use of the word “grasping” for “understanding” has a literal basis. Anything has that sort of reality which it exhibits when one has it between his thumb and fingers.

“Tangible,” of course, has as its root meaning “touch,” and touch is closely allied to grasping. However, if touch were the important factor in this grasping, we would have a very curious problem on our hands. Surely touch is as much a sensory quality as is color, sound, or taste. Yet touch has been said to be peculiarly the final test of reality for every dubious Thomas, and the basis of explanation. There is something mysterious about action at a distance. But say that this billiard ball is moving because another struck it, and the mystery is solved. The fact that equally mysterious factors, such as elasticity, are involved, is apparently irrelevant.

Yet there is a point missed. Grasping and holding are not merely affairs of touch, for what is at the tips of the fingers may escape. Grasping and holding involves resistance, size, and shape; and it is these qualities which have most often been associated with matter. The Democritean atom was something that a small man might have gotten between his thumb and fingers. This distinction drawn in favor of grasping rather than touch indicates that manipulation is basic to the meaning of what things are. The importance of the hand in the development of man has been noted often enough, and the operational or manipulatory account of meaning may be considered to be established in psychology. The hand, then, establishes a manipulatory field that intervenes between the stimulus and the consummatory act. To come back to the more primitive meaning of matter is therefore to come back to the more primitive means of finding out what things potentially are. As matter the thing has possibilities; it is something to be manipulated and investigated. The determination of its possibilities is the determination of its nature. Matter is manipulative and instrumental.

There is, however, a further point to clear up. If one places matter and the actualization of its nature in a temporal order with a temporal distance between them, I mean a real time of the passage of happenings, he has got inevitably to reintroduce consummatory qualities. Aristotle did this, setting up a qualitative physics. But as soon as the physicist became experimental, he started building his system in terms of manipulatory concepts that had no place for the qualities of Aristotle's world. The physicist was a doer rather than a contemplator, and he declared his independence of Aristotle in loud, repeated, and vigorous terms. The “nature” in which he was

interested had action as its prime assumption, rather than rest, and looked forward only to more action in which the result is always identical with the antecedent, *Ex nihilo nihil fit*. Matter and nature were thus identified, making the consummatory qualities mere epiphenomena or subjective vagaries. Coincident with this, of course, was in general a certain pride in refusing to consider human enjoyment and "consumption" as having any meaning for science. That phase could be left to such empirics as, shall we say, Marconi, Bell, Edison, and others. Science was the extension of the manipulatory field intervening between stimulus and consummation.

So far as a quality simply happens or appears in experience, let us call it consummatory. If we would not wait for the future to reveal the further characters of the thing, if we would anticipate the future, we must know what the "nature" of the thing may be upon which we may depend. In this sense we read into the thing a character whose full existence would be reached only at the end of a proposed act. This proposed act lies in a distant perspective which is a future. The character therefore that we *now* give the thing represents in that sense the importation of the future into the now, or if we ignore the temporal relation of the thing to its "nature," saying here and now the thing has this "nature," we ignore time. Obviously this character does not appear in direct experience.

For an example, I wish to choose a simple perceptual object, rather than an object of physics such as an electron or an atom, so that the conclusion will not seem to have application only to the latter. If we have a small six-sided block, and if we look almost directly at one of the faces, the corners of that face may appear as nearly right angles. But the corners of the other faces that we may see will not. The eye has the thing in perspective and the corners are not interchangeable directly. But we have instruments with which to measure them. With the square and the foot rule we try each corner and edge. Congruency is set up in this manipulatory act, and we ignore the successive character of the operations, saying that the angles or sides are simultaneously equal and interchangeable. The result that we get, therefore, does not appear in any perspective, nor is it directly compounded of perspectives. Mr. Russell's method of getting the "real" penny as a sum of an infinite number of aspects is simply not what we do. We have not followed his method of getting all possible views of the block, far and near. What we get is the result of congruency in manipulation. Present reflection is not responsible for the qualities that now appear in experience, nor is it responsible for the fact that some of those now appearing are more common and enduring than others. But the social mechanism in the individual, of which I spoke at the

beginning of this paper, makes possible the selection and entry of these common elements into the experience of the individual *as common*. The commonness is established in the identity set up by the manipulatory act. We get the "nature," or "inside of the thing," or "what the thing really is," therefore, in manipulation, because there we have congruency and hence identity with the thing. We now say that the block is a cube. The cube is a mathematical object. As such it is the "inner nature" of the block, made up of those characters which appear as identical in manipulation. All else are mere surface qualities.

When we ask what a thing is, we wish to be informed of some character that does not appear in immediate experience, or of some character that will indicate to us many further characters. As Whitehead says, "The shape of a volume is the formula from which the totality of its aspects can be derived."¹ Again, if we see a blue liquid and enquire what it may be, we do not wish to be informed that it is a blue liquid. We already have its surface qualities, so to speak. We want to know its nature—its inside. If we are told that it is a hydrous copper sulphate, or if we are given a formula and if that has any meaning to us, we may be satisfied. To the chemist this is an organization of meanings or possibilities, that will give rise to conclusions under certain conditions.

So far, then, as we read the character into the thing as its *nature*, we say we identify the thing. The reality of this "nature" would exist in our perspective only at the end of an indefinite number of proposed acts. But we say here and now, "this is what the thing is." In so far, time is eliminated and we have a simultaneous world, of what Whitehead called objects in simple location. The elimination of time, or the future as such, means that having the "nature" of the thing is not an awareness of the indefinite number of possibilities, but the *organization* of modes of action that would find their expression in some particular future, as Whitehead suggested in the quotation of the previous paragraph. Apparently, it is a very easy thing to forget that the object is a result of operations, for the very simple reason that we could not carry these operations always in mind. Forgetting, then, we turn the object into a thing-in-itself. For example, one may measure the mass of a body, the distance it travels, and the time of its travel, all of these results being obviously a statement of its relations to other things, and then, denoting these relations, i.e., $\frac{1}{2}ML^2T^{-2}$, by the word "energy" proceed to treat energy as a "something" enclosed within the boundaries of the thing. This localization within the boundaries of the thing of our abstractions, which indicate the possibilities of the thing in relation to

¹ *Science and the Modern World*, p. 95.

other things, is hypostatization. If we were to build a world out of such objects we would then have extended the manipulatory area throughout the universe, getting a world that does not appear in experience, and would perforce have to create some other realm that our consummatory qualities may inhabit.

If we treat scientific results not as results of manipulatory processes dealing with objective things, i.e., not as relative to scientific method, but as somehow already there, then we have absolute objects and out of them we construct an absolute universe. So long as the physicist's interest in the abstracted results led only to a casual interest in his method, the non-experimental character of this simultaneous world, caused by a gratuitous hypostatization, did not trouble him. But the necessity of increasing rigor in dealing with results led him to a vigorous reconsideration of his method. I have in mind, for example, Einstein's account of how he came to make his discovery, turning his attention to the statement of simultaneity in experimental terms. Yet another account by Planck gives an even more interesting insight into the curious working of the human mind. Keeping the old "world of the senses," Planck must keep also the old "real world," which was the physical world of the older scientists. But finding the latter world too substantial or solidified for the technique of his physics, he must needs have yet a third world. The two worlds first mentioned we may dismiss as obviously the carry over of tradition. Of the third, he speaks more instructively. In regard to it, we are warned against "the exaggerated application of the idea of Substance," which he says is primarily useful only in assisting imagination. But it may be asked, if this materialization of physical concepts so assists imagination, is it not very useful to scientific progress? If so, is it not likely to continue; indeed, ought we not to urge its continuance in the future? Furthermore, if it be so useful mayhaps there is a grain of truth to it. This problem is a very important one. In reply to the questions thus raised, one could call many witnesses, as they have been called previously to settle this problem. Chiefest of these witnesses would be the great Newton, to whom has been so commonly and erroneously ascribed the corpuscular theory of light.² His war on hypotheses was precisely an attack on the postulation of non-observable entities, although his postulation of the ether is a contradiction to his position. This calling of witnesses, however, would only draw up sides. It would not settle the matter. As another mode of attack, one may point out as Russell did³ that superstitions

² I owe most of my assurance on the point to the splendid but as yet unpublished research on Newton by my colleague, Professor F. C. Becker.

³ Bertrand Russell: *Sceptical Essays*, p. 40.

of all sorts have "assisted imagination" in science. However, such arguments do not get at the root of the matter, but give a misleading appearance to the problem as though it were a quarrel between metaphysics and positivism. The point that I mean to suggest is that this "assistance to imagination" arises because the location of the "nature" of the thing in the thing here and now, rather than dissipating it, so to speak, in an indefinite number of futures, is a vast simplification, because we can not always carry those possibilities in mind. Yet not only is thought dependent upon this localization because of the simplification involved but more fundamentally because the method is the very symbolic process necessary to thought. Now we have the explanation that I wish to suggest. The error arises in the failure to recognize that the location of the possibilities of the thing within its boundaries as its "nature" is a symbolic or instrumental process. Such a process is no more a "fiction" or an "Als Ob" than is the location of the mass of a body at its center of gravity, or for that matter the use of any sign or symbol. The failure, however, to recognize the instrumental character of the process has a history going back to the time when truths were Eternal Forms and experiments were but temporary and arduous ways of getting them, made necessary by our imperfect, sinful, and finite minds. If we may return to Planck, he goes on to add, "There is only one sure guide towards further development, and that is measurement, together with any logical conclusions that can be drawn from the concepts attached to this method. All other conclusions, and especially those characterized by their so-called self-evidence, should always be looked upon with a certain suspicion."⁴ In summary, we may say that the meaning of scientific results must be stated in terms of the actual methods of measurement. Parenthetically, it may be remarked that just for this reason popular books written even by eminent scientists summarizing scientific results may be very misleading. Returning to the main point, Bridgman states pretty much the same thing, "This point of view, that the schedule of operations by which the symbols acquire meaning is as important a part of the physical situation as the relations which are found to hold between the symbols themselves, has a bearing on a very widely spread tendency in modern physics and science in general to see nothing as significant except the relations, and so to reduce all science to a kind of topology."⁵

What then is the nature of the object which is beyond the manipulatory area? In the beginning of this analysis I attempted

⁴ Max Planck: *The Universe in the Light of Modern Physics*, p. 78.

⁵ "Statistical Mechanics and the Second Law of Thermodynamics," *Bulletin of the American Mathematical Society*, Vol. XXXVIII, p. 236.

the explanation of the more naïve use of the statement "there is an x ," by saying that under certain circumstances a thing having certain meanings would be perceived. On the other hand, the objects of physics are not perceptual, but are manipulatory. But then using the illustration of the block, a perceptual object, I attempted to show that *qua object* its "nature" is manipulatory rather than consummatory qualities. Thus we can give a more general meaning to the statement "there is an x ," capable of being extended to the objects of physics or to those of any other science. Stated in a lengthy and awkward manner the meaning is: the full understood conditions being set up for certain expected observable results, we identify the results as the nature of the conditions. The identities specifying the nature of varying conditions may be distinguished by such convenient names as we may care to invent. Anything beyond this is a gratuity useful for salving feelings that belong to simpler, perceptual conditions, but which under radically differing circumstances have not the value of a feeling as to the number of sheets of paper that would be required to make a stack to the sun. So far, then, as we state the nature of the thing, we state it in terms of manipulatory processes that exist in a here and now. It is an extension of the manipulatory area pushed out. It brings the future into the "now" and eliminates temporal distance. Thus it is a logical world rather than a temporal world of history. It is a mechanical world rather than a perceptual world, but as such represents the universality of our hypotheses. Similarly, Max Born pointed out that the absoluteness of space and ether simply meant the generality of mechanical laws.⁶ Such a world is indeed as Mr. Russell has suggested, a "public world."⁷

We have suggested the possibility that the physicist's world may be a dead man's world. That would certainly follow the complete isolation of manipulative and consummatory qualities, for man could find no place in a purely manipulatory system. Such has been the conclusion drawn by the materialist, who has considered the physical scientist his friend. This conclusion could also be accepted by the more ascetic Christian through the postulation of another realm for man's escape. It is, however, a denial of any attempt of man to find a home in the world, and hence can have no final acceptance. Thus has the principal of indeterminacy, with so little excuse, become the popular vehicle for the reintroduction of qualities more congenial to the soul of man. I agree crosswise that the Heisenberg principle has significance for the introduction of physics into the world of man. Nevertheless, I have a much more prosaic

⁶ *Einstein's Theory of Relativity*, pp. 60-62, 172, 185, 189, 246.

⁷ *The Problems of Philosophy*, p. 46.

reason. The principle in a striking way calls attention to the experimental or manipulatory character of knowledge. As such physics is not in contradistinction to consummatory qualities. It is a development of the restless and ceaseless activities with which man ever explores his world, and suggests that were there no men who appreciated great systems of thought there would be no physics. There would then be, and only then would there be, a dead man's world.

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MEDITATION UPON TELEOLOGY

ONE point upon which, I suppose, all naturalists of every shade of opinion agree is a refusal to accept final causes as explanations of the behavior of the universe and to regard the world-process as actuated by purpose. At first sight, indeed, it might seem that naturalism could accept a teleology that merely dramatized the existing situation by holding that nature intends to be whatever she actually is. God, to put it theologically, is a God of Things as They Are. This is very nearly the view of Aristotle, who identified the final and the formal cause, save that for him the natures of things were not laid out beside one another on the flat, but formed a hierarchy.

On second thought, however, the discovery of even so cosmopolitan, broad-minded, and indiscriminating a purpose at work in the world shows that all that glistens is not gold. For we now have all the disadvantages of both final and formal causation on our hands—two methods of explanation whose blighting effects upon progress in science and adventure in metaphysics are only too well known. Indeed, it is one of the many ironies of the history of philosophy that Aristotle, who was himself so naturalistic in spirit, and whose teleology was motivated throughout by strictly scientific considerations, should have set back the flowering of the scientific method and its fruit of modern invention by some seventeen hundred years. It is certainly arguable that had the mechanical theory of Democritus and the habit of explaining events by their antecedents rather than by their consequences prevailed, and had the nascent application of that method by Archimedes to the investigation and control of natural processes not been discarded in favor of Aristotelian teleology, all the triumphs of applied science that exist to-day might have been won for the race as early as the first or second century A.D. Conceivably, Pontius Pilate might have flown to Rome to ask for precise instructions, and the news of the Crucifixion might have been

flashed by radio to the ends of the world and have been read next morning in the paper by the ancestors of the Mayas in Yucatan.

But even if an all-embracing, impartial teleology of this sort were not, in spite of its innocent appearance, destructive of scientific investigation and progress, it would be worse than useless for the purposes for which explanation by final causes is commonly invoked. For teleology is read into the universe primarily as a means not so much of understanding dispassionately its workings as of assuring one's self that those workings are respectable, consoling, and morally edifying to man. Faith in a divine purpose guiding and directing the course of events is, to borrow a phrase from Mr. Kallen, essentially "a compensation in discourse for a disappointment in experience." It is, indeed, so compensatory that by many teleologists final causes are invoked not only to support the interests of man where they conflict with the interests of other living beings and to give him the comfortable feeling that the world process is designed to produce him and to foster his self-fulfilment; they are also supposed to favor the self-realization of those men who are accounted virtuous rather than vicious by their fellows, to prefer Christian to other moralities, and even to reinforce the peculiar views of right and wrong held by some particular Christian sect. For example, to compensate for the disappointment in experience, the Real is frequently supposed to be "dry" rather than "wet" at heart, to frown in its inmost soul upon gambling, and to be secretly an admirer of the late Anthony Comstock.

All this may be true. There is certainly no *a priori* reason why the world-process should not be teleological and moving towards some "divine, far-off event." It may even be the devout adherent of some Christian sect. But the naturalist finds it difficult to draw from an observation of the universe any such pious and edifying conclusion. Indeed, the difficulties of adopting even the broadest teleological interpretation of the world-process seem to him insuperable. For nature, once harnessed to human moral ideals, proves a refractory steed. Far from exhibiting any consistent endeavor to help man win his race, she as often seems intent on throwing and trampling him. Teleologically viewed, she displays no single or final end, but a bewildering confusion of cross-purposes. If she has a mind, that mind is archetypal of woman's traditional privilege of change. No unity of "moral" vision is discernible in her behavior, but rather a variety of conflicting goals at each one of which she can be said with equal reason to be aiming.

Again, if we are to regard the currents in the world-process that bear human life towards self-realization and happiness as intent upon performing that service, we ought logically, if our teleology is

thoroughgoing, to regard the tide-rips that bring ourselves, our hopes, and our ideals to nought as equally intent upon performing that disservice. In short, from a universe wholly motivated by final causes, we are as free to infer diabolism as we are theism; and forced to infer at least (as Plato saw in the *Laws*) the dualism of an evil contriver pitted against a good.

The only alternative is to substitute for an intelligent and designing devil a non-teleological factor like intractable matter, or necessity, or chance. But in that case our world is no longer wholly actuated by purpose; nor, it might be argued from the evidence, is it even surely dominated by the purposive principle. Nay more, we may regard our non-teleological element as obstructing a diabolic rather than a divine design, and see in it, not a limitation upon the exercise of benevolence, but rather a mighty fortress protecting us against the machinations of the powers of evil.

Moreover, if we admit a non-teleological or a non-beneficent factor into our universe, it is well-nigh impossible to limit its scope. The same kick that kicks some people down stairs kicks others up, and it is difficult to say whether the foot within the boot is benevolently or malevolently directed, or whether the impetus imparted in either direction may not be due merely to the mechanical recoil of the foot from an immovable stone. Then, too, if non-teleological activity must be invoked to explain some things, why may it not be called upon to explain all? If it is indifferent to the realization of any particular good, at least it is not deliberately opposed to such realization. There is nothing in the notion of mechanism as such to prevent its grinding us out quite as much good as the most benevolent and untrammelled purpose can produce. And as a matter of fact, the universe, if it is mechanical, is a machine that enables the organisms it manufactures to live and to attain precisely the same amount of self-fulfilment and happiness as is vouchsafed them by a beneficent God. Hence, in a universe of mingled "necessity" and purpose there is no criterion for judging how much of what benefits us is brought about by the one factor, and how much by the other.

Any and every purpose, then, or, in other words, no particular purpose at all, is suggested by the face and gestures of nature, teleologically interpreted. Conversely, the naturalist finds, any and every sort of world seems deducible teleologically from any purpose we may select as the end of the world-process. In fact, almost any end we may hit upon as the goal of creation might conceivably be realized with less waste and overhead than seems to be the case, unless we allow for the interference and obstruction of non-teleological factors that render the choice of the present means merely

faute de mieux. But a choice between equally suitable means for hitting a given target can not itself be made on absolutely teleological grounds, since from the point of view of the purpose in question it is six of one to half a dozen of the other which means are chosen. Nor can it be determined by considerations of expediency in the face of difficult and obstructive "necessary" factors like intractable matter or the devil, since either set of means would serve equally well to circumvent the obstacle. We are reduced, then, to some cosmic equivalent of flipping the coin—in other words, to chance pure and simple, as the determinant of the means employed.

Finally, the naturalist feels, the teleologist treats ends or purposes as if they were somehow self-subsistent and self-explanatory, and floated about in a metaphysical empyrean, all heads and wings and no bodies, like Christian cherubs, without any underpinning to support them. The reason doubtless is, as Spinoza suggested, that men are "conscious of their appetites and desires, but ignorant of the causes by which they are determined to desire anything." The fact and the nature of purposes need explanation quite as much as do the things they are called upon to explain. And, paradoxically enough, ends find their grounds in that for which they are supposed to be the reason. They are rooted in and arise from organisms whose natural endowment and propensities generate them and determine what they shall be. Ends are the projections of desires, desires the offspring of functions, and functions are the expression of structures, which in their turn are fashioned by antecedent events. It looks, then, as if structure and function must exist before purpose can come into being. The teleologist is putting the cart before the horse.

However, the naturalist is far from denying the existence and efficacy of final causes within what he considers their proper sphere. Organisms seem to contain within themselves a curve of growth which they tend to follow in the face of all obstructions. They "endeavor," to use a Spinozistic term, to support, defend, prolong, and reproduce themselves at all costs. When consciousness is superadded to vital activity, those tendencies become desires and seekings, their natural outcomes figure as ends, and the steps by which results are brought about become so many means to hitting a target aimed at in advance. In short, organic functioning irradiated by consciousness *feels* purposive, and conversely, whatever obstructs or disturbs the natural operation of the organism is regarded as an interference with its purpose.

The final cause, then, as viewed by the naturalist, is the light cast by organic impulse upon the road to be travelled, much as the lamps of an automobile illumine in advance its course. As the

organism grows more complicated, that light becomes wider in its spread and more variegated in tint, is thrown further along the route, and reveals more distinctly the objectives to be reached. Finally, the marvellous richness of the spectrum of human impulses and desires projected upon the universe casts upon it the lights and shadows of good and evil and focuses the natural scene about the bright vision of a perfected human life. To this heavenly vision man is not disobedient. All his Herculean effort to remold the world according to his heart's desire—his morality, his art, his theology, the practical applications of his science—bear witness to its compelling force.

Their purely human source and validity does not, however, make these higher values any less high, less splendid, less "spiritual," less authoritative for man. They represent the flowering of *human* life, and the *human* good, as Aristotle remarked, is all that concerns us. That flowering is none the less lovely, that good is none the less divine in the naturalist's eyes, because it is nourished, not by a superhuman and supernatural air, but by the rich soil of mother earth. The naturalist is careful not to confuse the justifications of human aspiration with its origins, or to consider human ideals less ideal and less worthy of worship because they are not suspended from above, but are supported from beneath.

Moreover, he regards it as natural and inevitable that man should endeavor to give to his ideals and aspirations a special cosmic backing by interpreting the world-process teleologically and by identifying the purposes he attributes to it with his own. For any and every event in the universe, precisely because of its local and incidental character, must, if endowed with organic drives and pet desires and aversions, regard itself as the fixed and central point about which and towards which all else moves, and must therefore invest its peculiar perspective and frame of reference with absolute authority. After all, it is the center in which its desires originate and from which they radiate, and if it is to survive it must impose them upon its environment, so far as lies within its power. The lowliest organisms ruthlessly appropriate from their surroundings whatever suits their special needs, and contemptuously spit out, as if it were absolutely worthless, whatever they can not assimilate to their own uses. All the operations of human life merely repeat the ancestral, protoplasmic example in a more complicated way. Tooth and claw are supplemented by machinery, which is nothing but an extension of man's organic sensorium and muscular system furthered by an inventive faculty that is nothing but an extension of animal cunning. So, too, the higher and "spiritual" human values reflect the idiosyncrasies of the human being, and its tenacious pur-

suit of them in the face of all obstacles is but an expression of the primitive self-centeredness and self-assertion without which no organism can survive. No wonder, then, that when facts seem to frustrate the accomplishment of human ends man should compensate for his disappointment by invoking cosmic purposes that re-establish upon metaphysical foundations that importance in the universe of which he would otherwise feel himself deprived.

Hence the naturalist is not unsympathetic with man's effort to coat fact, where it is bitter, with metaphysical chocolate. He expects to find him ingesting, digesting, and transforming into the very substance of truth everything in the world that subserves human ends and suggests a kindred cosmic goal; and on the other hand rejecting as trivial, negligible, and untrustworthy evidence of the nature of Reality everything that has a disagreeable moral or esthetic flavor and therefore ill accords with a teleological interpretation of the world-process. But he suspects that man is more fastidious than the Real, and that the edifying doctrines born of this fastidiousness are more indicative of the temperaments and situations of those that voice them than they are of the nature of the universe; just as our impression that the sun and the planets revolve about the earth throws more light upon our incidental and peripheral position in the solar system than it does upon the real movement of the heavenly bodies themselves. The perspective introduced by teleology into metaphysics he believes to be distorted, and it is an integral part of his naturalism to discount and to correct as far as possible its falsity. That his attempt to rectify is in itself the imposition of a human perspective upon nature he can not and does not deny, nor does he deny the "wishfulness" of his own thinking. It springs from one of the profoundest wishes of the human being—the scientist's desire to know and to face things as they are, rather than as our moral and esthetic yearnings would have them be. His discourse, he feels, is not a compensation for, but an explanation of, the disappointments of experience. His thinking may be wishful, but at least it is not wistful.

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CAN THE LAW OF CONTRADICTION BE STATED WITHOUT REFERENCE TO TIME?

IN the introduction to the *Principles of Pure Understanding*, Kant deals briefly with the Law of Contradiction, which he treats as the sufficient criterion of the truth of all analytic judgments. He takes occasion to quarrel with a particular formulation of the law:

i.e., "It is impossible that a thing should at the same time both be and not be." He criticizes this statement as introducing empirical considerations into a purely logical formula: "The principle of contradiction, however, must not in any way limit its assertion to time-relations."

There is, I think, behind this criticism an assumption which underlies the whole of his treatment of general, as opposed to transcendental, logic, the assumption, namely, that general logic applies to the possible as well as to the actual. Now, the possible can very plausibly be treated as timeless. What is possible simply is possible and there are no time limitations attached, so that this statement of the law would have no application to the merely possible. If, however, it is meant to apply to the actual: i.e., the world dealt with by the transcendental logic, there is no reason why it should not include a reference to time, as every actual existent is (necessarily, Kant would say) in time.

I propose to argue that the principle deals with the existent and thus necessarily involves a reference to time. This seems obvious in Kant's first example, for a man can not be both young and old at the same time; but, apart from the temporal qualification, there is a sense in which every man is both young and old. How does Kant deal with this difficulty? He says:

If I say that a man who is unlearned is not learned, the condition, at one and the same time, must be added; for he who is at one time unlearned can very well at another be learned. But if I say no unlearned man is learned, the proposition is analytic, since the property, unlearnedness, now goes to make up the concept of the subject, and the truth of the negative judgment then becomes evident as an immediate consequence of the principle of contradiction, without requiring the supplementary condition, at one and the same time.¹

There is obviously some confusion here, for it is not at all evident that the second statement does not need the qualification as much as the first. But Kant's meaning can be made clear by the following consideration. Understood extensively, the judgment needs the time qualification and, as it stands, is strictly false. For it means: Of all the unlearned men who have existed, do exist, or will exist, no one is learned. And, as a matter of fact many men have had both characters. Understood intensively, however, the judgment is true and timeless. It means: The complex predicate "unlearned man," is incompatible with the predicate, "learned." This is a strictly universal judgment and has no immediate connection with the existent, so that it is irrelevant, on the view I am advocating to the Law of Contradiction. The Law of Contradiction is a law of co-inherence of attributes and what it states is that incompatible

¹ Critique A153. B192. Kemp Smith's translation, p. 101.

attributes can not inhere in the same substance at the same time. The temporal qualification is clearly necessary when the law is stated in terms of substance, as a substance endures through time and undergoes changes. I shall consider later whether there are other terms in which the law can be stated and which make the qualification unnecessary.

My conclusion as to Kant is that the distinction he was trying to draw is the distinction between a statement about universals and a statement about particulars. That this is the case is, I think, shown in the following sentence.² "The misunderstanding [he says] arises first of all from our separating a predicate of a thing from a concept of that thing." I can not attach any meaning to the expression, "concept of a thing" except "complex attribute," in this case the "being-an-unlearned-man." We separate part of the attribute, "unlearned," from the rest and begin our statement, say:—"A man who is unlearned." Kant goes on, "and afterwards connecting this predicate with its opposite." I.e., we finish our sentence, "is also learned." This, Kant says, is "a procedure which never occasions contradiction with the subject (for learning is just as compatible with manhood as the lack of it), but only with the predicate which has been synthetically connected with that subject." It is necessary here to note the ambiguity of the word, "subject." If it means "substance," as Kant seems to think, the predicate has not been synthetically connected, for, if the subject of our judgment is an actual unlearned man, the predication is the product of analysis and the further predication contradicts the subject; but, owing to the ambiguity of the term used, Kant can argue as if the subject were the universal, "manhood," in which case the subject is not contradicted by either predicate. Kant finishes his sentence in a burst of inconsistency with his general argument: "and even then, only when both predicates are affirmed at one and the same time." In my opinion, this gives the whole case away, and amounts to an admission that the law does not apply to substances apart from the temporal qualification.

The discussion so far would lead us to suppose that there might be two Laws of Contradiction, the one applying to substances and needing the temporal qualification, the other to universals or attributes and not needing to be so qualified. This is, I think, wrong, for I believe that the traditional Law of Contradiction is essentially a law of the co-inherence of attributes, although it has sometimes been confused with a possible law concerning the self-identity of attributes and their relations to each other. For this reason the proper form of the law is that given by Kant, "A can not be both B and not B,"

² *Critique, loc. cit.*

for, if the law is to have meaning as applied to substances, the predicate must not be identical with the subject, as indeed it can not be.

It might be supposed that the alternative form, "*A* is not not-*A*" would be the form of the law as applied to attributes and, as far as I can see, this might be the correct form of such a law; but I think it would be misleading to call such a law a Law of Contradiction, as the traditional law of that name presupposes the self-identity of attributes and the relation of predication.³

Our question, therefore, concerns the Law of Contradiction as applying to existents. We have to ask whether this law, which is the only true law of contradiction, can be stated without reference to time. The question, I think, is not without importance, for if the law can be stated without reference to time, it implies that an existent can be unambiguously indicated without reference to its time-context. If, that is, we can state the law in the general form, "No existent can have incompatible attributes," we must be able to define existent in a way which:

(1) precludes endurance through time.

(2) ensures that an existent has all its characteristics always and never acquires any new characteristics.

This would be equivalent to disproving the reality of time and change.

It is necessary here to say something more about incompatibility, a relation between attributes which, as we saw, is presupposed by the Law of Contradiction as applying to existents. If the general form taken by the law is to be understood, it must be realized that the negative of an attribute is an attribute incompatible with it. Not-red does not mean either "some-color-other-than-red" or "anything-that-is-not-red"; but simply as it says "not-red," which is a single attribute which is compatible with any other attribute except "red."⁴

This observation will be seen to have some importance later on; but to return to our main problem, it does not seem to me that it has been realized by all logicians. Bradley, for instance, sees no difference in principle between the forms, "*A* is not both *B* and not-*B*" and "*A* can not at once both be and not be."⁵ Notable exceptions

³ For a very clear statement of this view see Bradley, *Principles of Logic*, I, p. 146. This seems to me unexceptionable, although I can not agree with everything he goes on to say.

⁴ The predication of a negative attribute will state a negative fact about a substance. For the development of this conception, see McTaggart, *Nature of Existence*, Section 31.

⁵ *Principles of Logic*, p. 146.

are Bosanquet and Mr. Johnson and they both think, I believe, that the law can be stated without reference to time if it is put in the form, "No proposition can be both true and false."⁶

This I think is not true; but, before considering this way of dealing with the problem, which involves the second condition stated above, let us see how the first condition may be met. This is done comparatively easily by substituting "event" for "substance" as an equivalent for existent in our statement of the law above. For an event does not endure through time or only for so short a time that it can not have incompatible characteristics.⁷ We thus get rid of the most obvious difficulties such as Kant raises; but only at the price of raising a whole host of others; for an event, although it does not endure through time, is in time and in virtue of this fact seems to have incompatible characteristics. It is in fact on this statement of the Law of Contradiction in terms of events that McTaggart bases his argument for the unreality of time.⁸ I.e., Past, Present, and Future are incompatible characteristics of events; but all events have them. Therefore in reality there are no events and there is no time. This argument would be impossible if the temporal qualification were essential to the Law of Contradiction. I think that the qualification is essential whether the law is stated in terms of events or of propositions and therefore that the argument is impossible. Now the opinion that the qualification is not essential arises partly, I think, from the confusion mentioned above with a possible law concerning attributes and partly from the statement of the law concerning existents in terms of propositions. Mr. Johnson argues at length that this formulation is timeless and for this reason contrasts it favorably with the more usual statement in terms of subject and attribute. Like Bosanquet, he relies on the formula "once true, always true," and bases his argument on Bosanquet's distinction between "time of predication" and "time in predication." The former can change, the latter is essential to the proposition itself. He says:

Taking as examples "The water has a temperature of 30° C." or "Mr. B is at home" we must say on the one hand that if these propositions are true at any time, they are true at all times. But we must not say that if the predicate "having a temperature of 30° C." or the relation "being at home" is true of a given subject at one time, it will be true at all times. This obvious comment would not have been required if language had distinguished in the mode of the verb "to be" between a timeless predication and a tense (present,

⁶ Bosanquet, *Logic*, II, p. 210. Johnson, *Logic*, I, pp., 234 ff. The relevant passage in Bosanquet concerns immediately the law of identity; but I think it applies equally to all the postulates of thought.

⁷ There would still, of course, be difficulties arising from continuity, but these may, I think, be treated as irrelevant to our purpose.

⁸ *Nature of Existence*, Chapter 33.

past, or future). Certain logicians have, however, deliberately denied the dictum that what is once true is always true, and their denial appears to be due to a confusion between the time at which an assertion is made and the time to which an assertion refers; or as Mr. Bosanquet neatly puts it between "the time of predication and the time in predication."

At first sight this does seem, as Mr. Johnson says, "obvious," so obvious, in fact, that it would be madness to quarrel with it. It does, however, need careful examination. If a proposition is to be always true or, indeed, ever true, it must specify unambiguously the fact to which it refers, i.e., it must include within itself the time in predication. This condition seems to be fulfilled by making the subject an event, for an event has only one time, and the proposition, "The event, *A*, has the predicate, *B*" seems to be true for all time so that the Law of Contradiction could be unambiguously stated: "The same event, *A*, can not have the predicates, *B* and not-*B*." But this implies that we are able to give a sufficient description of an event without using any tenses, i.e., we must be able to indicate the time in predication without reference to the time of predication. Otherwise, we can not be sure of what we mean by the same event. If I specify an event, for example, as Caesar's death, it is possible that there might be another event called Caesar's death and sharing all its original, although not its relational, properties occurring two thousand years from now in the future. I can not, then, be sure of what I mean by "Caesar's death" without further specifying it as "the event having the characteristics of Caesar's death and occurring before or after the present." It might be objected that I could specify by reference to another event, e.g., the Great War; but this will lead to an infinite regress unless I can be sure that the Great War is a unique event and a little reflection will show that the only unique thing about it is its temporal position and this can only be specified by reference to the present.

Of course, the second Caesar's death would not be the same event as the first "Caesar's death," but the meaning of two propositions having the first Caesar's death and the second Caesar's death as subjects, unless the relation of Caesar's death to the present were specified, would be the same; i.e., they would be the same proposition and this proposition—e.g., Caesar's death marks the end of the Roman Republic—would be true or false according to which event we were considering, or rather it would be neither true nor false, for it would be ambiguous, while the perfectly unambiguous statement—in its full form, "the event called Caesar's death occurring earlier than the present and later than any other event called Caesar's death which is also earlier than the present (for there might, of course, be two or even an infinity of Caesar's deaths earlier than the present) marks the end of the Roman Republic,"—is true; but it need not re-

main true, so that even of a proposition having any event as its subject we can only say that it can not be both true and false at the same time.

For instance, Mr. Johnson would not, I suppose, maintain that "Mr. Brown is at home" is, as so stated, true at all times; but that it is true at all times that Mr. Brown is at home on August 6, 1932. But his is not the case, unless we further specify "on the only day called 'August 6, 1932' which has occurred up to the present time." Without this qualification the proposition might be false at another time.

It must be admitted, however, that McTaggart is right in stating as a general principle that an event does not change its characteristics. There seems to be only one set of properties which an event can acquire or lose and these are relational properties arising out of a temporal relation to the present. There is, then, only one class of propositions which become true or false, for history, as a matter of fact, does not repeat itself. It may, for instance, become true that at some time earlier than the present I was in San Francisco, which is now false; and it may become false that at no time earlier than the present has a woman visited the North Pole.

It may seem to be begging the question as against McTaggart to argue that events change their characteristics in regard to their temporal relations and therefore that the Law of Contradiction must be stated with reference to time. For he argues that the law must be stated without reference to time and therefore that this change of characteristics is illusory. But I think that the argument is valid if it can be shown that the law stated without the qualification is not self-evident, and that the belief that it is self-evident is founded on a confusion. Both these points have, I think, been made in the course of the discussion. Kant's argument with which we began might be regarded as sufficient proof that the law is not self-evident in this form.

Moreover, the real basis of the argument is the nature of propositions concerning the existent. If a proposition is to be either true or false, it must indicate unambiguously the fact to which it refers, and in the case of propositions about the existent it has been shown that this can not be done without reference to the present time. Consequently it is of the essence of propositions about the existent that those which are true should become false and vice versa.

The becoming false of true propositions depends upon the reality of negative attributes and negative facts as defined above, and this part of the argument is more open to question than that which deals with becoming true of propositions. Dr. Broad, for example, holds that no true proposition ever becomes false; but simply that more

propositions become.⁹ If, however, it is the case, as Dr. Broad seems to hold, that the events which are now present are not succeeded by anything, this will be a negative fact which can be stated in a true proposition which will become false. I am not sure that Dr. Broad accepts negative facts of this kind so that this is not brought forward as a valid *argumentum ad hominem* against him.

The results which have emerged in the course of this discussion are, I think, the following:

(1) The Law of Contradiction can not be stated without reference to time.

(2) The belief that it can is founded on a confusion arising out of the facts: (a) That there is a law of self-identity of attributes which seems very like the Law of Contradiction and which can be stated without reference to time. (b) That there is a form of the law of contradiction which it is very plausible to represent as free from time conditions.

It has incidentally emerged, I think, that the attempt to prove the unreality of time on the supposition that the Law of Contradiction can be stated in terms of events without reference to time is based on a false premiss and is therefore fallacious.

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BOOK REVIEWS

The Problem of Error from Plato to Kant. A Historical and Critical Study. LEO W. KEELER, S.J. (Analecta Gregoriana, Vol. VI.) Rome: Pontificia Universitas Gregoriana. 1934. xiii + 282 pp. 15 Lire.

In ten successive chapters, Father Keeler searches for a doctrine of error in the works of the pre-Socratics and Plato, Aristotle, the Skeptic, Stoic, and Epicurean schools, Augustine, Aquinas, Scotus and the Spanish Scholastics, Descartes, Spinoza, the British philosophers, and Kant. He is convinced that a history of the problem of error is of crucial significance to epistemology, since "a theory of knowledge, to be acceptable, must necessarily make room for a complimentary theory of error" (p. ix). Yet he finds that the fact of error raised an important philosophic problem, for only three of the great philosophers, Plato, St. Augustine, and Descartes, and even these three failed to formulate an epistemology adequate to account for error. The pre-Socratics did not recognize the real existence of error; Aristotle thought to dispose of the problem by certain on-

⁹ *Scientific Thought*, p. 83.

tological and logical principles; the post-Aristotelians made error depend on the will, but fell into skepticism, or were prevented by their materialistic sensism from accounting for error; after Thomas Aquinas, Scotus, and the Spanish Scholastics marked a retrogression, and after Descartes, modern philosophy fell into a similar confusion concerning error: Spinoza throws us back to the position of the ancient Eleatics, Hume to that of Protagoras (though both fail to recognize, as the ancients had, that by their principles error would be impossible), and though Kant's position might be developed to yield a coherent explanation of error, it presents great difficulties as stated by Kant. Of all the philosophers who pass in review, Thomas Aquinas comes nearest to a satisfactory solution, for although he tends to reformulate and elaborate the teaching of Aristotle (in whom no satisfactory discussion of error can be found), the influence of Augustine forces him to a consideration of the problem. Father Keeler's findings may be summarized in the statements that the problem of error exists for every philosophic system, that it is discussed explicitly only in few, that it is discussed satisfactorily in none. If the reader had hoped for a solution of the problem in its history, he would have anticipated the author in his conclusion that "the result is frankly disappointing" (p. 277).

Father Keeler's book is more valuable for what it illustrates than for what it states. As Father Keeler envisages the problem of error, it is recognized only in the Platonic tradition, but it can be solved satisfactorily only with the aid of Aristotelian distinctions. It would hardly be a caricature of his conclusions to say that, following his exposition, one tradition of western philosophy recognized the existence of error, but was unable to account for it, that all the remaining philosophers were able in varying degrees to explain the nature of error, but were constrained, in the degree in which they were successful in explaining its nature, to deny its existence. As Father Keeler sees it, the problem centers about judgment and assent; apparently in the history of philosophy two reasons have been suggested for assent to what is false or the judgment that the false is true, that is, for the occurrence of error—the unreliableness of our cognitive faculties and the perversity of free will. Both solutions are unsatisfactory: the latter, since will alone is insufficient to force the assent of the understanding, and error becomes unintelligible; the former, since understanding assents only to what is known, and when we try to determine what we know when we err, error becomes indistinguishable from knowledge. Apparently the virtue that Father Keeler finds in Thomas Aquinas lies in the fact that he raises the problem in almost that form: he treats error as assent, under the influence of the will, to the reality of something we do not

know. Apparently his weakness lies in the fact that he is unable to explain the nature and possibility of such assent (p. 103). What would be involved in that further task is not clear, for Father Keeler closes his book with the remark that happily the formulation of a positive and complete theory of error falls outside the scope of his study (p. 278). Moreover, the frequency with which philosophers are convicted of failure to recognize important problems and the ease with which equivocations and ambiguities that escaped them are discovered, may arouse the reader to some doubt concerning the happiness of Father Keeler's conclusions. He has shown, not that the problem of error has been ignored or treated ambiguously, but that it has varied from philosophy to philosophy. He has shown that no philosopher has considered the problem in the form in which he approaches it, but he has neglected to show that it is intelligible or that it is a problem in that form. Even the palm which is granted to Plato, Augustine, and Descartes, viewed critically, changes significance: the chapters on those philosophers are the most satisfactory in Father Keeler's book, whereas his treatment of Aristotle, Spinoza, Kant, might be found to be partial, unsympathetic, and false to the spirit of those philosophers. Father Keeler's learned and able excursion into the history of the problem of error is interesting as an illustration of the relativities and shifts of philosophic and historical exposition and of the transformations involved in philosophic criticism. In particular, it is a useful reminder that the search, so frequently undertaken in philosophic writings today, for predefined concepts in past philosophies (usually to discover that they are not there), though useful as a rhetorical device, is of doubtful value as an instrument of philosophic research or criticism.

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Le Transfini. Sa Logique et sa Métaphysique. MARCEL LALLEMAND.
Paris: Desclée De Brouwer et Cie. 1934. 302 pp. 25 fr.

This is an interesting addition to the series of books on philosophy edited by M. Maritain. Of the three parts into which the book is divided, the first is devoted to a brief but lucid exposition of classical *Mengenlehre*. In the second, M. Lallemand takes issue with Cantor's view that the integers constitute an "actual" infinite. He argues that the ascription of cardinality to infinite "collections" of numbers is illegitimate, because Cantor's definition of equality presupposes a determinate order in which the elements of such "collections" must appear in order that the relation of similarity be established between them. M. Lallemand's thesis is that a class has a cardinal number only when, independent of the order of its elements, it is similar to some portion of the series of integers. Hence the first *aleph*, and *a fortiori* all the others, are simply signs for

the indefinite but determinate progression of a series. The diagonal proof for the non-denumerability of the continuum is interpreted to mean that a series which is not generated by a determinate principle can not always be ordered as is the series of integers. The final part of the book is devoted to answering those theologians who deny the possibility of an actual infinite, and in an appendix summary justice is done to contemporary finitists. For strangely enough, M. Lallemand argues for the possibility of an actual infinite collection, e.g., of stars, which would be present to the divine intelligence as a finite collection of objects is to men. But this thesis, as well as the view that while God can have present to him such an actual infinity but not as enumerated, is sustained by shockingly bad arguments. M. Lallemand's criticism of the Cantorians places him definitely among those who, on methodological grounds, must reject an "actual" infinite; and from this point of view his support of a non-Cantorian actual infinite is an irrelevance in his book.

E. N.

S. T. Coleridge's Treatise on Method as published in the Encyclopædia Metropolitana. Edited with Introduction, Manuscript Fragments, and Notes for a Complete Collation with the Essays on Method in "The Friend." ALICE D. SNYDER. London: Constable & Co., Ltd. 1934. xxviii + 92 pp. 6/.

Coleridge wrote a "General Introduction" for the *Encyclopædia Metropolitana*. This introduction appeared in the first volume of the *Encyclopædia* in 1818, though in a form which Coleridge considered "garbled." The connections of Coleridge with the *Encyclopædia* (which were originally planned to be intimate and extensive) ended with the first volume. The manuscript of the "General Introduction" is lost, so that the exact form of Coleridge's writing can not be ascertained. Much of the material, with long passages repeated *verbatim*, was used again by Coleridge in an enlarged edition of *The Friend* (also in 1818).

Miss Snyder of Vassar College has edited the "General Introduction," which has not been easily available to students of Coleridge. The chief value of her edition is for textual criticism. The ideas of Coleridge—his estimates of Bacon and Plato, his theory of knowledge, his fundamentally moral standpoint—are well enough known from other readily available works. Yet one point of philosophical interest is brought out by the "General Introduction" which would be largely missed in a reading of the kindred material in *The Friend*. This point is that Coleridge saw the constitutive and unifying function of Mind as enabling all knowledge to be presented, not in a series of separate articles arranged according to the alpha-

betical order of their initial letters, but in a synthetic and integrated order of the progressive development of ideas. For the *Encyclopædia Metropolitana*, unlike the *Britannica*, felt Coleridge's influence in seeking to present all knowledge as one rational whole.

S. P. L.

The Elder Henry James (1811-1882). AUSTIN WARREN. New York: Macmillan Company. 1934. xi + 269 pp. \$2.50.

The father of William James here comes forth clearly as a philosopher in his own right. Professor Warren has succeeded by this admirable portrait of Henry James's mind in making it significant not merely as a background for the more famous Jameses, but as a comprehensive and ingenious system of speculation and philosophic insight. Especially the chapters entitled "Swedenborg," "Fourier," and "The Philosophy" can be recommended to philosophical readers as certain to present them with a type of thought at once unconventional and universal, original and yet expressive of the basic themes of all philosophy. The elder Henry James, inheriting the humanitarian enthusiasms of the Revolutionary generation and stumbling upon the terminology of eighteenth-century Christian liberalism through the writings of Swedenborg, developed a system of Christian socialism and humanitarian theology which, though similar in many ways to the allied systems of Comte, Fourier, and the Swedenborgian liberals, is nevertheless a unique and impressive philosophy. It is unfortunate that readers will attempt to estimate this philosophy in terms of that of William James, and Professor Warren does well to underestimate the influence of the ideas of the father on the minds of his sons. The cosmopolitan education and independent temper were shared by father and sons, but the categories and problems of the two generations were quite different. It is no less unfortunate that the author in his "Epilogue" has yielded to the temptation to look at Henry James through the perspectives of our own generation and to project his socialism or associationism against the ideology of the labor movement. The book as a whole, however, is remarkably true to the *milieu* of its subject and the author's generous use of quotations enhances the liveliness and accuracy of the narrative. Perhaps Professor Warren's enthusiasm is contagious, but the reviewer can not escape the feeling that the elder Henry James has a style so much more sincere and good-humored than that of the younger, and a mind so much more catholic and speculative than that of William, that the father may yet outlive his sons. For his sons were essentially representative of a generation; he, on the contrary, was an

individual, at odds with his civilization, emancipated from his contemporaries, yet conversant with the philosophical language of many ages, who, as such, may appeal to any generation.

H. W. S.

Le Nouvel Esprit Scientifique. GASTON BACHELARD. Paris: Félix Alcan. 179 pp. 10 fr.

M. Bachelard's little book is one of the series edited by M. Delacroix called the *Nouvelle Encyclopédie Philosophique*. In it he tries to erect a "non-Cartesian epistemology" on the basis of the new physical science, which, he maintains, employs a type of thinking not used in the old. In most general terms this epistemology may be described as one which abandons the fundamental metaphors of substance and thing, for that of function. The difficulties of the subject-attribute logic have been pretty well exploited in recent times and it does indeed look as if quantum mechanics and molecular statistics were not conceived in accordance with its technique. M. Bachelard has made another good statement of these difficulties and a persuasive plea for a recognition of this new type of thinking in epistemology. The author of this notice, although sympathetic with this point of view, feels that the time has come to stop leading for a reconstruction and to begin making it. He is of the opinion that when such a reconstruction is seriously attempted, it will be found that while the things now inadequately expressed by Aristotelian logic will no longer cause difficulty, the things which Aristotelian logic did express adequately will suddenly take on the appearance of puzzles. He can, to be concrete, see why Aristotelian logic (and its corresponding epistemology) can not handle "It is raining," but he can not see how the new logic (and its corresponding epistemology) can handle "The ink is black."

G. B.

The Architecture of the Universe. W. F. G. SWANN. New York: The Macmillan Company. 1934. Pp. ix + 428. \$3.75.

This is another attempt to explain current physical theories to the layman. A pretty good attempt some may find it, for different minds find different approaches helpful. Others will think it tiresomely wordy, and the elaborate analogies less clear than straight description. Dr. Swann tries valiantly to make the scientific point of view seem reasonable, but not all scientists would recognize this portrait of themselves. The philosophical comments are not unworthy of respect, but the author lacks the acute originality of an Eddington, and has something less than the Jeans' quality of pictorial intuition.

After preliminary historical remarks, there is an excellent long chapter on the atom. Then follows a semi-philosophical discussion concerning the sense in which we are dealing with "reality" in an atomic theory. After a chapter on the laws of thermodynamics, good but not novel, come comments on the "fate of the universe," only partly adequate to their great scheme. But the popular expositor can hardly keep us abreast of all the exploding theories of the exploding universe. There then follow discussions of the meaning of "dimensions," of relativity, and of space and time. A great deal of this rather laboriously develops the obvious for the philosophical reader, and leaves him unsatisfied about the real difficulties. The book closes with chapters labeled "Vital Processes" and "Science and Theology," not without merit but not profound. As a whole the book is recommended reading, but not indispensable.

H. T. C.

OTHER NEW BOOKS AND JOURNALS

PHILOSOPHY OF SCIENCE. Vol. I, No. 3. The Method of Physical Coincidences and the Scale Coördinate: *Wm. Bender*. Beyond Mechanism and Vitalism: *E. A. Singer, Jr.* The Problem of Vital Organization: *R. S. Lillie*. The Views of Haeckel in the Light of Genetics: *H. J. Muller*. Freud and the Scientific Method: *J. F. Brown*. Scientific Method and Social Science: *Joseph Mayer*.

THE AUSTRALASIAN JOURNAL OF PSYCHOLOGY AND PHILOSOPHY. Vol. XII, No. 2. Mind as Feeling: *John Anderson*. Four Men Talk about God (I): *R. P. Anschutz*. Locke's Theory of Knowledge (I): *H. H. Ferguson*. Fact and Ideal in Political Theory: *A. Boyce Gibson*. Academic Freedom: *W. Anderson*. An Experiment with the Crichton Test: *P. M. Bachelard*.

REVUE DE MÉTAPHYSIQUE ET DE MORALE. 41^e Année, No. 3. L'Oeuvre Scientifique de Paul Painlevé: *J. Hadamard*. L'Esthétique de Schleiermacher: *B. Croce*. Lumière et Substance: *G. Bachelard*. L'Astrobiologie et la Pensée de l'Asie: Essai sur les Origines des Sciences et des Théories Morales (suite): *R. Berthelot*. Le Problème du Choix, l'Existence et la Transcendance dans la Philosophie de Jaspers: *J. Wahl*.

REVUE PHILOSOPHIQUE. 59^e Année, Nos. 7 et 8. G. W. Leibniz. Lettres et Fragments Inédits concernant les problèmes philosophiques, théologiques, politiques de la réconciliation des doctrines protestantes (1669-1704), publiés avec une introduction historique et des notes par *Paul Schrecker*.

ARCHIVIO DI FILOSOFIA. Anno IV, Fasc. 2. Il nuovo realismo: *F. Orestano*. Sul problema del rapporto tra scienza e filosofia: *A.*

Banfi. Sulla intuizione logica secondo la logica del potenziamento: *A. Pastore.* Pensiero ed esperienza: *F. Lombardi.* Il ritorno di Cartesio: *A. Lantrua.* Una nuova fase degli studi di filosofia del diritto di G. Del Vecchio: *G. Gonella.*

GIORNALE CRITICO DELLA FILOSOFIA ITALIANA. Anno XV, Fasc. 3. Elementi di storia della logica: *G. Calogero.* Il platonismo del Rinascimento italiano e la dottrina degli oracoli caldaici: *B. Kieszkowski.* Il pensiero filosofico di Maurizio Blondel nel suo sviluppo storico: *G. Durante.* Il pensiero filosofico dei fisiocritici: *S. Corti.*

PHILOSOPHISCHE HEFTE. IV. Jahrgang, Heft 3/4. Sonderheft: Ontologie der Gegenwart Deutscher Antitraditionalismus Französischer Traditionalismus. Kritik der Schelling-Jaspers-Heidegger'schen Ontologie: *Maximilian Beck.* Traditionalistisches Schrifttum und Tradition in Frankreich: *Siegfried Lang.*

SCIENTIA. Vol. LVI, N. CCLXVIII-8. Sul più lontano avvenire dei sistemi planetari: *G. Krall.* Théorie coordinative de la constitution des composés organiques et métalloïdiques: *G. Urbain.* Biology in Relation to some Present-Day Problems: *H. B. Fantham.* Die Sprachatlasarbeiten der Welt. II Teil. *S. Papp.*

NOTES AND NEWS

Dr. Homer H. Dubs, Professor of Philosophy at Marshall College, is taking a year's leave of absence to engage in research work at the Library of Congress for the Committee on Chinese Studies of the American Council of Learned Societies. The work he is to do is a partial translation of one of the Chinese dynastic histories, the Ts'ien Han Shu.

Dr. Paul Russell Anderson, formerly Associate Professor of Philosophy and Religion at MacMurray College, has been appointed Professor of Philosophy at Lake Erie College.

Professor Max Wertheimer, formerly of the University of Frankfurt, and a distinguished representative of the Gestalt theory of psychology, is now a member of the Graduate Faculty of Political and Social Science of the New School for Social Research in New York. Professor Wertheimer will give a seminar on the Gestalt theory. While it is intended primarily for psychologists, it will also stress the implications of the Gestalt theory for teachers, physicians, psychiatrists, and will indicate the rôle of psychology in the various fields of science.

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Eros. RAPHAEL DEMOS.
Specific Quality. CHARLES HODES.
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Volume XXXI. No. 15. July 19, 1934.

"To Sleep, Perchance to Dream." B. A. G. FULLER.
Knowledge by Fiat. ELEANOR BISBEE.
Is Time Relative? A. A. MERRILL.
Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 16. August 2, 1934.

Causation: An Episode in the History of Thought. LAWRENCE K.
FRANK.
Truth, Error, and the Location of the Datum. DONALD C. WILLIAMS.
Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. Nos. 17 and 18. August 16 and 30, 1934.

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THE JOURNAL OF PHILOSOPHY

THOUGHT AS AWARENESS AND THOUGHT AS BEHAVIOR¹

I

IN a paper published in this JOURNAL, Volume XXIX (1932), pp. 322-331, there was offered for consideration the still somewhat speculative thesis that all consciousness is reducible to sensory awareness. In elaboration, it was suggested, first, that types of sensory awareness can be qualitatively distinguished according to special type of sensation content, such as blueness, roughness, or pain, and according to type of localization content, i.e., according to position in the space of experience, such as outside the body, inside the body, and on the surface of the body; secondly, that introspection is not a distinct and unique method of analysis of consciousness, but merely another type of analysis of consciousness into type of sensation content and type of localization content. The present paper proposes to attempt an analysis of thought in strict accord with these principles.

In order to exhibit more clearly just what this attempt proposes to encompass, let us contrast it with certain traditional notions about thought current in philosophy. Unfortunately, these notions are varied and not always as clear as they might be. Philosophers have always been much exercised over such questions as What is the source of knowledge? What is the object of knowledge? What is truth? and What are the right and the wrong ways of thinking? But they have not often asked themselves the question, What is thought? When the question was raised it was generally referred to the psychologist, and, possibly, with propriety and justice. However, although not interested in a critical analysis of the psychological nature of thought, philosophers have often spoken and written as if it were clearly established that thought had this or that psychological character.

For example, it is clear that many philosophers have accepted the existence of some mental entity or event which they have variously named thought, idea, concept, notion; or essence. It has been implied that this mental entity or event had a unique and irreducible

¹ A paper read, in part, before the Southern Society for Philosophy and Psychology, at Birmingham, Alabama, March 30, 1934.

nature. Spoken words were asserted to be symbols for such entities. This point of view is best exhibited in the traditional definition of a proposition: a proposition is a judgment expressed in words. The judgment, obviously, was not constituted of words, but of ideas or essences. The spoken or written or whispered or imagined word, then, had a meaning for which it was a sign; this meaning was an idea or essence.

However, an idea obviously also had a meaning, namely, some event or thing in experience or in a world lying outside of, but denoted by, experience. For example, the Platonic idea (with a small i) was a recollection of the Platonic Idea (with a capital I), that is, of the archetype. Thus a triadic relation was assumed, the terms of which were (1) the object or event signified, (2) the idea which was the mental counterpart of this, (3) the word which was the symbol directly for the idea and indirectly for the object or event. To be sure, there was much disagreement among philosophers as to what kind of existence each of these terms enjoyed; and there were, of course, philosophers who denied one or more of them *real* existence. Some said that only things *existed*, but ideas or essences *subsisted*. Others said that things or events had *real* existence, ideas only *logical* existence. There was, however, rather general agreement that ideas were non-sensory in character. Accuracy demands that we also make mention of that small group of philosophers who did, and do, agree that thinking actually proceeds in terms of words. Ultimately practically all agreed in shifting the responsibility for descriptive analysis and psychological definition to the psychologist, apparently feeling that they were well rid of a problem which seemed to lie outside of the special field of philosophical inquiry.

During the last twenty-five years this responsibility has been accepted with a vengeance by at least one school of psychologists, namely, the behaviorists. If I understand this theory correctly, in its extreme form it contends that thought is nothing but subvocal speech. When the subvocal muscular movements have been accurately described by an observer, in strict accordance with accepted scientific procedure, the psychological description of thought has been exhausted. Although these subvocal movements are for the most part covert, the scientific behaviorist, armed with delicate apparatus, can note and name them.

This theory thus reduces thought to behavior and emphasizes the part which it plays in adaptation. However, the almost fanatical determination of the extreme behaviorist to rid psychology of the introspective method and of consciousness has, it seems to me, resulted in an indefensible extremism. For, if the conscious aspect

of thought is denied, thought becomes a type or case of pure behavior, a mysterious something called "pure act." To one who has daily commerce with those hardy metaphysical abstractions which have achieved sainthood in the history of philosophy, the appearance of this new candidate is a bit ominous. Will it take its place alongside the spectral figures of pure being, pure substance, pure reason, and pure matter to haunt the waking and sleeping hours of philosophers? For the philosopher to receive from the psychologist thought as "pure act," in return for thought as a unique non-sensory variety of mental activity in which character he originally resigned it to the critical mercies of the psychologist, is, in my opinion, a poor exchange indeed.

For what is "pure act" or "pure behavior"? There are no doubt events going on in the world of which we are not aware and there are no doubt events going on in our bodies of which we are not conscious. There is no sound logical ground for condemning *belief* in the existence of so-called unknowables. If the extreme behaviorist claimed no more than this we could not well find fault with him. But when he claims that thought is "pure behavior" he means much more than this, for he attempts to prove his assertion by offering us a *description* of this "pure behavior," and he claims to have delicately adjusted instruments by means of which he can *observe* me in the act of behaving "purely."

Now it seems to me clear that the behaviorist could not possibly observe my subvocal speech movements, that is, my thinking, unless he were sensorily aware of these movements, in which case he has reintroduced consciousness into the discussion, at least in the sense of sensory awareness. Logically, this implies a two-term relationship, the "pure" act and the awareness of it. What the behaviorist actually does is to accept certain sensory awareness contents as giving him information about certain events. In order not to become involved in epistemological subtleties let us here be content with saying that the existence of these events *as events* is inferred. What the behaviorist finds thought to be is therefore not "pure behavior," but is what he accepts as a sensory report of some sort of behavior. There is no justification for substituting an inferred event for a positive experience content (especially by somebody who has been so proud of his avoidance of metaphysical assumptions).

There is a second objection to the extreme behaviorist point of view. There is no good reason why my own awareness of my subvocal speech movements should be ignored in a description of thought. If I can be sensorily aware of my own toothache—and who will deny this—I can be sensorily aware of my own subvocal speech movements. Moreover, assuming that I have an adequate vocabulary,

I should be just as capable as the behaviorist of giving a verbal report of my awareness-content.

However, at this point it may be questioned if I really am conscious of these subvocal speech movements, for it may be argued that these movements are bodily events of the type of which I am not and can not be conscious. I do not think that anyone will deny that I am conscious when I am thinking; at least sometimes. Nor will it be denied that I am, at least to some extent, sensorily aware, through somesthetic sensations, of the movements involved in ordinary vocalization. Now if it is true that I can be sensorily aware of vocal movements, it is not unreasonable to assume that I can be sensorily aware of these movements when they are partially inhibited, that is, when they are subvocal. It is therefore here accepted without further description or proof that consciousness of thought is somesthetic sensory awareness of subvocal speech movements, this awareness-content being analyzable, as always, into type of sensation content and localization content.

But this raises the question as to whether my report or that of the behaviorist shall be accepted as the "scientific" description of thought. If we assume that my sensory equipment, my powers of scientific analysis, and my language ability are the equal of those of the behaviorist, he can support his claim to be the sole authority only if he can prove that he has *objectively* observed and is *objectively* describing thought, whereas I am only airing a lot of *subjective* and therefore meaningless nonsense. But it is clear that neither he nor I can lay claim to having observed "pure" behavior or behavior *per se*. It is likewise clear that both of us have used our senses and both of us have assumed that we have been sensorily aware of something. The only issue which can therefore be raised between us is whether or not our respective sensory-awareness-contents are referable to the same events. If this can be affirmatively determined our descriptions are not mutually exclusive but complementary, not rivals but allies.

But how is this to be determined? Obviously only by some kind of association by inference of positive experience contents. For example, the testimony given by two eye-witnesses of an accident is in each case a more or less accurate verbal report of their respective experience contents. Both reports are accepted as having reference to the same event, first, because both were (presumably) in the immediate neighborhood of the accident, secondly, because there is some degree of correspondence between the type of sensation contents of their respective reports, thirdly, because the localization contents of their reports are approximately the same. Now it is evident that there may be considerable difference in respect to type

of sensation content. For example, one man may say that he saw a red light showing in the semaphore, and the other may say that he saw a green light there. In spite of this contradiction the testimony of both is not thrown out. But if one man said he saw a red light in the semaphore on the northwest corner and the other said he saw a red light in the semaphore at the center of the intersection of the two streets, we know at once that the testimony is not contradictory because the type of sensation contents do not have the same localization content. In other words, we do not refer two types of sensation contents to the same object or event if the localization contents do not agree. Hence we may say that the inferential association of two experience contents with the same thing or event depends upon agreement in localization content rather than upon absolute agreement in type of sensation contents. Another illustration will help to emphasize this point: When I report a severe pain in a certain locus of my internal economy and the examining physician sees an inflamed area in that same locus, both of us are justified in assuming our experience reports to be about the same thing or event.

Now we can apply the same type of analysis to the supposedly rival claims of the subjective and objective reports of thought. It is clear that the type of sensation content of the objective observer and that of the subjective observer are radically different. The behaviorist offers a verbal report of his visual and tactual sensations and the subjectivist offers a verbal report of his somesthetic sensations. The localization content of the behaviorist's experience content is of the outside the body type; that of the subjectivist is of the within the body type. But a comparison of data and an appeal to mutual identification of localization content enables us to *infer* that our respective experience contents have reference to the same event. Moreover, I am actually aware, through tactual sensations, of the areas to which the behaviorist is applying his instruments. The final conclusion is that we are describing the same event, and, although this is an inference, it is a perfectly justifiable one.

It follows that neither one of us is justified in insisting that the other shall discard his description. One description can not be substituted for the other because they are complementary. To insist upon this is to fall into the error of another type of psychological extremist, namely, the type which insists that a description of neural phenomena must be substituted for a description of the content of consciousness. Certainly, logic and good sense permit us to make an inference of causal relationship between these two types of phenomena or to infer that both experience contents are referable to

the same event, but the same logic and good sense do *not* permit us summarily to rule one or the other description out of court.

II

Having accepted the general contention of the behaviorist that thinking is subvocal speech and having insisted that the thinker himself has positive awareness of subvocal behavior, we must next attempt an analysis of thought on the basis of these assumptions. We propose to limit ourselves here to the application of the general principle to the analysis of abstract thought and to a restatement of the problem of meaning.

Abstract thought has traditionally been assumed to proceed in terms of ideas, concepts, or essences. What, now, in the light of the modified subvocal speech theory, is an idea or concept or essence on the conscious side, that is, as the thinker himself experiences it? It is a complex or configuration of sensations, artificially analyzable into specific sense-data, but actually experienced as a whole; that is to say, it is an awareness-complex of an inferred subvocal event, a subvocally spoken word. The abstract idea, justice, then is merely an awareness pattern of the subvocal pronouncement of the word "justice." Obviously, the notion of pattern can be extended to cover phrases, clauses, and possibly even sentences, so that an idea in the popular sense of a definition or of a standardized association of words is properly provided for. We could then also extend the notion of speech habits to include thinking habits, that is, subvocal speech habits.

However, if we discard the traditional notion of idea, what solution can we offer of the problem of meaning? If the meaning of a word, whether vocalized, subvocalized, or whispered, can not be identified with some unique mental entity such as idea, with what can it be identified? The problem of meaning implies association and the notion of association implies a relation between terms. Here is our cue: what are the terms of the relation of meaning as our theory would have it? So far we have spoken only of (1) the subvocalized word, a behavior pattern, the independent existence of which as event can only be inferred; (2) the sensory awareness of the subvocal event, which is the conscious side of thought. What other terms, if any, are necessary to provide for "meaning?"

Let us approach the problem of meaning in abstract thought from a distance, beginning with as simple and concrete an illustration as possible. A child, having acquired a simple vocabulary and learned its use, would, on seeing an unusually large dog, probably say, "That is a large dog." The words would be a verbal report of its sensory experience content, which content would be their

meaning, functionally considered. If the child spoke these words subvocally, that is, if it *thought* them, the meaning would be the same as before. If it had dreamed seeing a large dog, it would subvocally, or vocally, report it thus: "I saw a large dog in my dream." The imagination content would then be the meaning of the words in the same sense as above, it being reported in addition, or rather, in differentiation, that the experience was an imagined one. Thus, whether the experience were "real" or imagined would make no difference: in either case the words are functional symbols used to report the content of experience. The subvocal response might be considered a substitute response, though some would prefer to speak here of a modified response. However, the subvocal response would not, of course, be a substitute response for the experience content. If the child made a verbal error and, e.g., said subvocally, "large book," it would at once correct it, which is sufficient proof that thought can not be defined as pure behavior, for how would the child know that it had made an error if it were not sensorily aware of the words it had subvocalized?

Summarizing these two illustrations, we may say that subvocalized words have their meaning in their function of reporting positive experience content by means of symbols. The terms involved for complete analysis would be (1) immediate sensory awareness content, (2) inferred behavior response, that is, the subvocal activity, (3) immediate sensory awareness of this bodily activity. Thus the direct meaning of the immediate sensory awareness content of the subvocal activity would be the original sensory awareness content, i.e., seeing the large dog; the behavior response as behavior and conceived as event might well be considered an inferred meaning. There is another point to be emphasized here: it is possible to conceive theoretically of an organism which would have sensory awareness of external events, that is, sensory awareness with outside of the body localization content, and which would respond with some kind of bodily behavior to such events, but which would not have the power of being sensorily aware of this behavior, that is, which would not have a consequent awareness experience with within the body localization content. In such a case inhibition or correction of behavior by the organism would be impossible. Thought would then indeed be "pure" behavior.

However, we have so far not yet considered that type of thinking usually denoted by the term, abstract thought, for in the above illustration the meaning of the words is specific and concrete. Unfortunately, it is not always clear what philosophers and psychologists mean by abstract thought, or at least there is no universal agreement on the subject. For the purposes of this paper we shall

limit ourselves to the type of thought generally denoted by the term "conceptual thought," that is, thought which proceeds in terms of concepts or universals. Notice should be taken of the fact that the term "concept" is sometimes used in the sense of a definition (e.g., as Socrates used it) and sometimes in the more obscure sense of a single logical entity (e.g., as in the case of the "universal" of the Medieval Realists). This usage is analogous to that of the term "idea." It is only with the concept in the sense of a medieval universal that we are concerned in this paper.

For illustrative purposes, let us suppose that I am in a zoo and have just come upon a cage in which there is a tiger. I then think, that is, say to myself subvocally, "That is a tiger." That "a tiger" is here a common noun and that its meaning must therefore be a concept or universal is clear. But what does this mean? Can this universal be described in terms of experience content? It seems unreasonable to insist that somewhere in my past experience there is an image of a "tiger-in-general." The actual sensory awareness content which led me to think, "That is a tiger," was of course concrete and specific. We may say here that any experience-content must be concrete because of the very fact that it is a particular experience event. Had this particular tiger been a personal acquaintance I might have thought, "This is the Duchess." But since I know no tigers as individuals, my response would have been the same no matter what tiger I happened to see. Functionally conceived, then, the term "a tiger" is here a universal because I use it in response, or could use it, to any member of the class. Its universality lies in its use and not in the awareness-content with which it is associated. Its universality is functional.

The same is true if I am reporting a tiger seen in a dream or imagined. When I think, "I saw a tiger in my dream," in one sense of the term the meaning of "a tiger" is the particular concrete image which occurred in the dream, in another sense, the meaning could have been any tiger in my experience because in my experience all tigers are alike. To summarize the implications of these illustrations, then: in this type of experience the verbal response is to a particular sense-awareness content and as such the term is not a common noun and its meaning is not a universal in the traditional sense; it can be called a universal only because its function is potentially universal in the sense that it can be used and can be interpreted as a symbol for any member of a class.

But it will be objected that we have not used as an illustration a true example of conceptual thought. Let us therefore try another illustration. Suppose that I ask myself in thought, What is a common noun? Certainly here the meaning of "common noun" is

any noun which refers to a class and my question is therefore clearly an inquiry after a universal. If I respond with an example I will merit the disapproval which teachers manifest when a student dodges a request for a definition in this fashion. The experience content which I am trying to locate is not a specific experience content of some particular noun, but an experience content for which "a common noun," or "common noun-ness," is the verbal symbol. But where is this experience content and what is the nature of it? I believe that the only and therefore the correct answer to this question would be a definition such as, "A common noun is one which can be used to denote any member of a class." Thus again we have a definition in terms of function, based not upon an experience content *like* a universal, but upon the use of a term.

Let us next examine an instance of an abstract universal, e.g., greenness. Is there in experience anywhere a single awareness content which, in the traditional sense, could be the meaning of the term "greenness"? Frankly, I can not find such an experience content. If I insist upon bringing up some image before the mind it is a particular image, vague, no doubt, but having the particular character of some shade of green. It can not therefore be said that there is an abstract universal experience content for which the term is a symbol. I can associate a definition with the term, as above, but this definition will not be a definition of a universal in the traditional sense, but will be a functional definition in the sense that it defines the function which the term performs in language, the nominalistic function, namely, of serving as a symbol in communication, whether private or public, for a class of particulars.

The problem of meaning is thus in the last analysis a problem of the integration of awareness and behavior, for it is a problem of the use of verbal symbols for awareness contents. A skeleton report of integration in a thought-situation would include as associated elements the following: (1) A specific sensory awareness content which may or may not be accepted inferentially as giving knowledge of some independently existing thing or event. If the independent existence of some thing or event is inferred, this existent may be said to be the "meaning by reference" of the sensory awareness content. (2) A second stage may or may not intervene, that is, some variety of sensory awareness content, whether recalled, imagined, or newly experienced, as, for example, when a bodily attitude towards some object or event is aroused or when there are emotional accompaniments of the original sensory awareness content. (3) A verbal response of the subvocal type which is a report in terms of verbal symbols of some sensory awareness content. The meanings of the symbols, individually and collectively, are to be

found in the sensory awareness content, and, since words are symbols, they can in the last analysis be defined only in terms of function. (4) On the conscious side, the subvocal or thought response is sensory awareness of the subvocal movements. These movements can be conceived as existing as independent events, that is, as pure behavior, but only in and by inference.

Obviously, such a skeleton report as the above has all the unavoidable abstractness of a classification. It has and can have no specific concrete experience content for its meaning, for it bears the same relation to concrete experience that a classificatory system in zoology does to the individuals classified. For a description of any specific case of integration of awareness and behavior we must look to literature and history.

One objection to the description of thought outlined above will surely come from those who live in constant dread of the spectre of epiphenomenalism. If thought on its behavior side is inhibited or modified motor activity of the vocal machinery and on the conscious side sensory awareness of this motor activity, is not thought, on its conscious side, a mere *ex post facto* awareness of what has already happened, and is not thought then merely an epiphenomenon, a harmless, useless, helpless, after-appearance?

This question would certainly have to be answered in the affirmative if it were true that awareness lies entirely outside of what is commonly called the causal series. The awareness of subvocal behavior would then be merely another instance of the "froth and foam of our laboring existence." But this conclusion does not seem to be a necessary consequence of this theory of thought. The fact that I am sensorily aware of the organic disturbances which constitute, in part at least, the motor side of emotion, and the fact that I have learned that the indulgence in overt expression of emotion, such as screaming and running, has a tendency to prolong the unpleasant somesthetic sensations, makes it possible for me to inhibit, partially at least, the overt expression and thus to exert some degree of control over the duration and the intensity of the disturbance. This would not be possible without awareness of the original disturbance.

In the case of imaginative thought, it is clear that the imaginative survey of several possible courses of action is preparatory to selective activity. In the case of abstract thought, the awareness of the subvocal activities can be preparatory for actual overt speech, for when I am aware of what I am thinking I can anticipate what the possible results may be and thus amplify or correct what I am going to say. Even if no overt speech is planned, my awareness of my thinking makes expansion and correction possible. To be sure,

as *event* the original subvocal behavior is irrevocably past when I become aware of it, and the awareness of it can have no effect on it. But my awareness can have effect on future behavior. Thus the awareness of subvocal behavior can be shown to fall naturally within the configurations of awareness and behavior, that is, in the causal series, and there seems to be no reason why we are not justified in making the usual types of causal inference. However, even if epiphenomenalism were an unavoidable consequence of this theory of thought, this fact would not prove our description to be inaccurate.

In conclusion let us enumerate the advantages of this description of thought: (1) it makes it unnecessary to assume and defend the existence of the traditional unique mental entity, idea, or essence; (2) it naturally and without dialectical strain or subtlety finds a place for thought in the realm of sensory experience; (3) it makes possible and justifies the study of thought in strictly scientific fashion, both by the thinker and by the observer, and brings this study within the realm of legitimate inference; (4) it makes it possible to fit thought, both on its motor and on its conscious side, into an integrated whole. These are no mean advantages, and, although it may be true that truth is not a matter of advantage or disadvantage, it is likewise true that an inquirer, in determining the usefulness of a particular description, can not be indifferent to them.

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ON THE NATURE OF REFERENCE¹

IT is often claimed that current researches in the analysis of sign-situations have abolished, or are about to abolish, all the traditional problems of knowledge. In this paper I shall suggest that such a consummation, although it is one devoutly to be wished, is far from having been achieved. I shall argue that, in one case at least, an old epistemological issue has simply been stated in new terms, even though these may turn out to be more fruitful terms. More specifically, I shall try to show that, so far as it has yet proceeded, the analysis of that phase of the sign-situation which I call reference has done nothing more than to bring us around again to a central problem of the Kantian philosophy. This problem, furthermore, has by no means been solved or proved to be meaningless.

Nevertheless, the treatment of knowledge as a sign-situation has, I believe, removed certain pitfalls. It is becoming accepted that knowing can no longer be profitably conceived as a simple, unanalysable act, nor even as a simple relation between two elements.

¹ Read, in a slightly condensed form, at the meeting of the Western Division of the American Philosophical Association, Indiana University, March 31, 1934.

When the act of knowing is treated as a sign-situation, at least three factors or elements are seen to be involved. These are variously called: (a) a stimulus-object, referent, or independently existing thing; (b) a datum or sign; (c) an interpretation, thought, or meaning. In the present discussion these factors will be called, respectively, the object, the sign, and the interpretation. And I shall consider primarily that type of situation which includes the making of a simple perceptual judgment such as the hackneyed one, "That is a tree."

In this example the first factor, the object, is asserted to be a physical thing, the tree, external to the organism and acting upon it as a stimulus. The other two factors, the sign and the interpretation, are characters of the organism's response to that object. Introspectively regarded, they may be called psychical events or mental contents, although they have their physiological side. In the situation we are considering, the sign is the irregular greenish patch immediately given; the interpretation includes the judgment "That is a tree" and a number of other responses as well. In practice, it is often difficult to make a rigid distinction between the sign and the interpretation, since interpretation may be instantaneous and modify the sign. The distinction, however, mutilates the facts no more than do many other distinctions that are indispensable for psychological analysis. And sometimes the sign and the interpretation are clearly distinguishable, not only by analysis, but also by inspection: a confused patch looms up and wavers uncertainly a while before I know where to place it or what to call it.

This distinction between the elements of a sign-situation is familiar. Less familiar, although I believe equally valuable, is the discrimination of relations holding among these elements. Three such relations are possible: (a) that between the object and the sign, which I shall call stimulation; (b) that between the sign and its interpretation, which I shall call meaning; and (c) that between the interpretation and the object, which I shall call reference.² The tree, through the medium of light, acts upon my sense organs and stimulates me to have a datum; this datum I use as a sign meaning the judgment "That is a tree"; and this judgment in some way refers to the physical object tree.

This analysis of the sign-situation might be objected to on the ground that what I have called factors or elements are really activities or processes, and therefore should themselves be called relations. The objection is especially plausible in the case of the factor "inter-

² For these relations I have employed the terminology suggested by Mr. Frederick Anderson in his article "On the Nature of Meaning" (this JOURNAL, Vol. XXX, 1933, p. 212), although I can not accept his account of these relations.

pretation." Interpretation, like meaning, is syntactically ambiguous: it is both an "-ing" and an "-ed" word. For this discussion, however, I shall use "meaning" as an "-ing" word, to designate the relation or process, and "interpretation" as an "-ed" word, to designate the "end-term" of the meaning relation. A concept or a proposition as a mental content is usually a heard sound (which indeed need not be overtly pronounced), and it is sufficiently discrete to be treated as a substantive. Elements of this sort may terminate an activity which begins with the equally discrete occurrence of a visual sign. The activity of connecting the sign with the interpretation may then be spoken of as a relation, in this case a meaning-relation.

So much for the distinction between factors and relations. It might be explained also why a meaning-relation has been distinguished from a reference-relation. Some writers on the subject use meaning and reference as synonymous. Whatever one choose to call them, these two relations do constitute different movements or phases in knowledge. The appearance of the sign may merely cause me to say, "That is green," or, less elliptically, "A green datum is presented to me." The sign thus is interpreted, i.e., labelled and identified, without any assertion as to what Messrs. Ogden and Richards have called its place in an external context. Here, then, we have meaning but no reference. When I go on to say "That is a green *tree*," I seem no longer to have simply a relation between the sign and the interpretation: the latter points beyond itself and asserts something about the external world. There is, in a sense, a return to the object, a completion of the circuit round the triangle.

This preliminary description of the situation is metaphorical and highly simplified. One of the most baffling facts about knowledge is this: that reference is a different kind of relation from the other two, stimulation and meaning. It differs primarily in that the latter two, stimulation and meaning, are direct causal relations: the action of the object upon the organism causes the sign to appear, and the occurrence of the sign causes an interpretation of it to be made. Of course, in neither of these two cases is the factor in question the sole or sufficient cause of the other factor. But reference is not a causal relation at all. If it were, knowledge would be just a game of ring-around-the-rosy, and much less perplexing than it is.

What complicates the matter especially is that in perceptual reference we are not led directly on from the interpretation to the object, but shuttled back from the interpretation to the sign. Let us consider the instance above given. When an indeterminate green patch floats into my ken, it may hover there for a while before my

interpretative processes get to work and produce the judgment "That is a tree." After this interpretation takes place, it is obvious that there may be two sorts of return to the sign or datum:

(1) As a result of my interpretative act, the sign is no longer a mere indefinite, unlocalized esthetic datum. It clicks into place in the perceptual landscape; its outlines have become definite and it is related to other elements in the manifold of my experience. I feel it, as does a painter, to be a mass with formal relationships to other masses. It becomes part of a perceptual nexus, an ordered world towards which, or in which, my attitude is perfectly integrated. The sign, for example, is no longer a relatively isolated *visual* datum. My muscular senses are adjusted towards it, my auditory apparatus may project certain heard whisperings into its leaves. This complete coördination of all my responses, including the sensory data, constitutes what is often called the "phenomenal world." Such an ordering of the datum with respect to the other elements of my experience, if we halt the analysis here, is a kind of pseudo-reference, and it is often mistaken for genuine reference. But it must be emphasized that the synthesis here performed is after all only a synthesis within my *responses*: i.e., a rather intricate correlation of data with interpretations. To use again the language of the authors of *The Meaning of Meaning*, I have a perfectly organized psychological context, but I do not have reference, for reference is defined as the relation between a psychological and an external context. I have constructed, if you like, the phenomenal object, but the stimulus-object remains aloof, outside the synthesis.

(2) There is also another kind of return from the interpretation to the datum. This occurs when my interpreted datum does not fuse altogether satisfactorily with the sensory field. I "have" the green patch, I interpret it as a tree, I assign it to its place in the perceptual landscape—but it does not quite fit. It is too large, or lighter in color than it should be at the distance which I assign to it. The datum refuses to be incorporated within the phenomenal object. It becomes once more a sign; it pushes me on to further inquiry. A problem of verification arises. I inspect the datum more closely; I may move nearer to it. Then I find that its articulations are not those of a tree, but those of a patch of moss. After such a game of battledore and shuttlecock between the datum and various interpretations, I finally fit the elements of my experience together into an ordered psychological context or phenomenal world. The datum no longer leads me on to anything, as it did when it served as a sign; it comes to rest in the perceptual landscape as a mossy rock.

In both these situations, I am dealing with relations of various degrees of complexity between signs and interpretations, that is to

say, with meaning-relations. What at previous sight appeared to be an act of reference transcending experience, now presents itself as nothing but the establishing of order within experience. Strain as I may towards the independently existing object, I can never get outside the circle of my responses. So far as it has gone, this analysis of the sign-situation has left me in subjectivism or phenomenism.

The current representative of this position is the logical positivist, who would reduce reference entirely to meaning; and this amounts, in effect, to the abolition of reference, in the sense that has been given to that term. No proposition or concept, he holds, is meaningful unless it can be explicated in terms of sense-data and operations. These two, sense-data and operations, are the only factors that he admits into knowledge. The transcendent object can never be a datum, nor can it be formulated as an operation, therefore it must be declared meaningless. Or, as it has been stated in a slightly different form: "Inference is either logical or empirical. If the former, it is tautological or analytic; if the latter, its conclusion must be theoretically capable of experimental verification." The inference to a transcendent object which acts as a cause or stimulus is obviously not tautological; nor, on the other hand, can it be "verified empirically." Hence, for the notion of a world of transcendent objects, the logical positivist would substitute its equivalent stated in terms of meaning, i.e., of "scientific formulae or laws" of the form: "If such and such operations are performed, events *a*, *b*, *c*, etc., occur."³

Now the logical positivist, I believe, is right in refusing to treat reference as inference. The theory of meaning, furthermore, which underlies this refusal, is a useful one and has a wide sphere of application. Unfortunately, however, the logical positivist is unable to build a complete philosophy upon his theory of meaning. This, when pressed by critics, he is forced to admit quite frankly: "The common-sense world is presupposed, but this presupposition, it is essential to note, is metaphysically neutral, for the question of the ontological status of physical objects is not raised. Consequently, criticisms of the operational theory which concern the nature of common-sense objects . . . are irrelevant."⁴ Three consequences can be drawn from this admission: (1) That the logical positivist tolerates a crying scandal within his philosophy when he holds to the existence of "common-sense" objects which, by his own criteria, are meaningless; (2) That, in addition to inference, he admits another ground of valid belief, which he calls "presupposition," al-

³ G. Boas and A. E. Blumberg: "Some Remarks in Defense of the Operational Theory of Meaning," this JOURNAL, Vol. XXVIII (1931), p. 549.

⁴ *Ibid.*, p. 544.

though its nature is nowhere analysed; and (3) that he is very non-chalant in his willingness to get along without an ontology.

In his franker moments, then, the positivist confesses his inability to dispense with reference to a realm of transcendent objects. (Whether these are properly described as "common-sense objects" is an important question that can not be discussed here.) Recent developments of an allied school of thought, pragmatism, are in the same direction. Thus Professor Dewey,⁵ when he is in one of his rare realistic moods, refers to an unobserved stimulus which starts off the act of knowing but thereafter drops out of the picture: the rest of his description of knowledge is entirely in terms of meaning. The idealistic strain, however, is usually dominant in his theory of knowledge, and he denies even so much transcendence to the stimulus-object. Its separate existence is cancelled by its absorption into the fluid monism of "experience"; or else⁶ the stimulus is treated as though it were really a part of the response. As a "pragmatic realist" Professor C. I. Lewis, likewise, begins his discussion of knowledge in *Mind and the World Order* with the presupposition of an independently existing reality, which is subsequently ignored and replaced by a "common world" of social meanings in which there are a variety of types of reality, each relative to a specified category or universe of discourse.

Messrs. Ogden and Richards have proposed an ingenious solution which does not go much farther than these theories. They hold that what I have called reference is an *inverted* causal relation.⁷ The object is not the effect of the interpretation, as the analogy of the other sides of the triangle would suggest, but its cause. And the object is the cause of the interpretation indirectly, or at second remove: i.e., the object causes the sign, and the sign in turn causes the interpretation. When it is said that the interpretation "refers" to the object, one is simply making a backhanded statement of this fact. So far, it is hardly possible to disagree. To the extent that a causal relation is involved, it has been stated correctly. The interpretation is in no sense the cause of the stimulus-object. But these writers take the additional step of saying that reference is *nothing but* the statement of such an inverted causal relation: "I am thinking of A" is *equated* with "My thought [i.e., my interpretation] is being caused by A."⁸

However strenuously these schools of thought might disclaim relationship with Kant, their unobserved stimulus or phantom refer-

⁵ *Experience and Nature*, 1st ed., pp. 336, 337.

⁶ See, for example, the chapter "The Unit of Behavior," in *Philosophy and Civilization*, p. 233 et seq.

⁷ *The Meaning of Meaning*, esp. p. 141 et seq.

⁸ *Ibid.*, p. 142.

ent plays exactly the same rôle in knowledge as did the thing-in-itself. It somehow mysteriously sets the knowledge process going, and then lapses into inscrutability. There remains the difficulty that confronts all beginning students of Kant: How can we know that there is a thing-in-itself unless we know something about it? And their reply, if they are forced to give one, is the same as Kant's: Experience can not wholly supply its own order, therefore we must assume that the ground of such order is at least partly imposed from without. And this answer, while it is perhaps a step in the right direction, is notoriously unsatisfying.

The analysis has been carried a stage farther by some of the critical realists. As Mr. Santayana has said, a realistic account of knowledge makes two claims: (1) that knowledge is transitive, that there is an object transcending the mental content, and (2) that the mental content is somehow relevant to the transcendent object.⁹ Now these are precisely the claims made in that phase of the knowing act which has been called reference. But the theories that have been considered so far take only the first claim into account, and they give very scant attention even to it. The pragmatic realist is a realist only to the extent that he admits the existence of some unperceived stimulus causing the response. He holds the question as to the relevance of the sign or the interpretation to the object to be futile. Messrs. Ogden and Richards' treatment of reference as an inverted causal relation is another way of stating the same thing: "By no manner of make believe can we discover the *what* of referents. We can only discover the *how*."¹⁰

Although the critical realists have a more adequate perception of the issues involved in reference, they have not yet, I believe, supplied an acceptable solution of them. Professor Lovejoy, in his *Revolt Against Dualism*, has made an exhaustive analysis of the transitivity of knowledge, but he has devoted almost no attention to the question of relevance. Mr. Santayana, on the other hand, tries to justify the second claim, but with little success. In order to explain the relevance of the mental content to its object, he is forced to take refuge in mysticism. Relevance, so he says, means identity of essence between the mental content and the thing. But so far few have been able to comprehend the "amphibious but incorruptible quality" by which the essence "may have now the ideal status of an object of intuition [i.e., of a datum or sign], and again the material status of the form of a thing." In the case of the so-called secondary qualities at least, there is no justification whatsoever for believing that the datum is qualitatively similar to some

⁹ Santayana: "Three Proofs of Realism" in *Essays in Critical Realism*.

¹⁰ *Op. citat.*, p. 180.

property of the object, or even that it reproduces its articulations faithfully. Into the making of the datum the organism, with its needs and its history, has entered inextricably.

If, then, we reject this application of the doctrine of essence, what is the result of these recent analyses of sign-situations? Not, as it is claimed, that they have either solved or abelished the problem of knowledge, but that they have simply brought us back to an old epistemological problem, restated in more promising terms. The problem of meaning has been clarified very considerably, but the problem of reference remains about where it was. The thing-in-itself is now called the stimulus-object or referent, and the Kantian representation is called the sign or datum. But the referent remains the unknown and ineffable cause, or quasi-cause, of certain elements of experience.

The purpose of this essay has been merely to show that the theory of signs, so far as it has yet been developed, has left us in the Kantian wilderness. But few philosophers, in practice, are content to remain where the current theory of meaning, strictly applied, would leave them. Actually, they manage to smuggle the claims of reference back into their philosophies by an appeal to common sense, that facile refuge of misology. For those who are discontented with such a naïve solution, I should like to indicate two methods of approach which may lead to a more coherent analysis of knowledge.

1. It is true that reference is a special case of meaning, in the broadest sense of the latter term. For reference is after all a psychological act, a phase of response, and there can never be a return to the transcendent object in the sense of an immediate grasp of it. We are left, then, with the alternatives of treating the claims of reference as illusory—and this, we have indicated, is untenable in practice—or else of enlarging our conception of meaningfulness to allow for these claims. The latter course would involve the recognition that the first claim of reference constitutes a genuine type of meaning, perhaps the only one, which can not be exhaustively analyzed in terms of the “given” and “operations.” Existentially it may consist of such psychological elements or functions, but in its intent it postulates a transcendence of them. The task of the epistemologist is to show how this intent can be valid and yet compatible with the existential status of reference as a psychological act.

2. The second claim of reference, it may be suggested with due trepidation, can be justified only by the revival, of course in a new and different form, of the distinction between primary and secondary properties. One of the weakest links in Kantian phenomenalism was admittedly the proof of the ideality of space and time.

There is some reason to believe that the spatio-temporal properties arrived at by interpretation possess a relevancy to the object superior to that of the secondary qualities. But to demonstrate this convincingly, in the present state of physical theory, is a formidable undertaking.

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BOOK REVIEWS

Hobbes. JOHN LAIRD. London: Ernest Benn, Ltd. 1934. xii + 324 pp.

Professor Laird regards Hobbes as "so delightful and so important an author" that he would stimulate English readers to study Hobbes more zealously. His book is so informing and so clear that he should find his purpose realized and should stimulate foreign readers to turn to Hobbes again too.

Professor Laird presents Hobbes's philosophy in four chapters on materialism, phenomenalism, ethics, and politics, with several subdivisions in each of these chapters. This method of historical writing has its merits and its demerits. It makes possible accuracy in detail and a completeness that facilitates reference for almost any purpose,—two virtues which Professor Laird has in conspicuous degree. But it tends to reduce a man's philosophy to a series of opinions on a list of topics and so to obscure the controlling idea that dominates such a philosophy as Hobbes's. Hobbes's philosophy has architectonic and massive outlines. His "phenomenalism" does not seem to me significant, except as one more symptom of intellectual currents in the century. His "materialism" is partly, I think, a curiosity like his efforts to square the circle. It is also partly an attempt to state a metaphysical view that would justify his central theme. And the central theme, a theme of ethical and political import, was the striking contrast between passion and reason, anarchy and government, nature and society, war and peace, futile imaginings and sound reflection, a bare and hideous existence and the good life. This contrast can be expressed in many ways and has many implications; and Hobbes followed it into a discussion of human nature, liberty and determinism, logic, religion, as well as morals and politics. It is what gives significance to his views on separate points and what makes Hobbes a really great figure in the history of ideas.

But I am riding my hobby instead of reviewing Professor Laird's book. Professor Laird errs, if I read Hobbes aright, in saying that "Hobbes vigorously opposed the Aristotelian thesis that man was

by nature a social or political animal" (p. 175). Hobbes's statements differ verbally from the English into which Aristotle is customarily put. For he arbitrarily used "nature" to mean what remains when reason is left out; and Aristotle, put into English, means by nature the full man with his reason as well as his passions, and his potentialities as well as his present actuality. Neither Aristotle nor Hobbes would idealize the primitive or unformed human animal; both Aristotle and Hobbes stressed the need of control, transformation, education. They differed in their theories of how transformation is best effected. But this is another matter.

Aside from this one point on which I differ, I find Professor Laird's treatment of Hobbes's opinions just and sound. And in introductory and concluding chapters on Hobbes's life, relations to predecessors, and influence I find unusual skill and penetration. Particularly fine are the sections on Hobbes's relations to Bacon and Descartes, and on the opposition Hobbes aroused in his own and the early eighteenth centuries.

S. P. L.

Le Développement de la Physique Cartésienne, 1646-1712. PAUL MOUY. Paris: J. Vrin. 1934. 343 pp. 40 francs.

This volume, which won the prize offered by the Académie des Sciences Morales et Politiques for 1932, traces in detail the fortunes of the Cartesian physics from the publication of Regius's *Fundamenta Physices* in 1646 to that of the last edition of Malebranche's *Recherche de la Vérité* in 1712. M. Mouy shows that Descartes' theories, instead of gradually breaking down after the death of their author, were developed and expanded by his successors and believes that their failure to win a victory over those of Newton and his school was due more to the character of their sponsors than to their inherent weakness. To support this belief M. Mouy points out what seems to him a striking resemblance between certain theories of Malebranche and the kinetic theory of gases, ionization, Kelvin's gyrostatic ether, the general theory of relativity, and the undulatory theory of light. The analogies are indeed striking, but they seem to the writer of this notice nothing more than analogies in the images used by the scientists to vivify their ideas. Thus a *tourbillon* revolves and something in a Bohr atom revolves and therefore solid matter is supposed by both Malebranche and Bohr to be made up of something which revolves. But that is far from saying that the *tourbillon* of Malebranche anticipates the atom of Bohr.

Much more impressive is the geometric nature of the Cartesian physics as developed by Malebranche. It is certainly true that a purely deductive physics is the ideal of contemporary science. But here we find something by no means peculiar to the aspirations of

the Cartesians. The *Principia Mathematica* are so geometrical that Newton refused to discuss the "nature" of the force of attraction and the book is used by Meyerson as a perfect example of what he calls "legalism." It differs from modern relativity-theory, not in its absence of geometry, but in the difference between its geometry and that of the relativists. But as great a difference exists between it and the geometry of Malebranche.

The importance of an historical subject is not to be measured by its modernity, though anticipations of our times have a romantic charm which can not be denied. One has no feeling that M. Mouy's work has suffered through its author's having yielded to this charm and the historical portions of his treatise are of the greatest value. He has read widely and minutely and documented his pages thoroughly. The study unquestionably fills a long felt need and supplements our knowledge of the seventeenth century.

G. B.

Max Webers Wissenschaftslehre. Das logische Problem der historischen Kulturerkenntnis. Die Grenzen der Sociologie des Wissens. ALEXANDER VON SCHELTING. Tübingen: J. C. B. Mohr. 1934. viii + 420 pp. 21 M.

Max Weber, Germany's greatest sociologist, is one of the few scholars for whom the examination of the epistemological background of his science is not merely the outcome of a posterior justification of his own intuitive proceedings. Methodological considerations were for Max Weber the searchlight which showed him the way he had to follow in his research. And even more: these considerations served him as a link between his sociological investigations and his political ethical standpoint—between objective science and his postulate of an ethics of responsibility. It is the merit of Schelting (who has in previous papers already analysed Max Weber's views) that he has disclosed the connection between the theoretical and the practical side of Max Weber's life-work and has made this the starting-point of his book on Weber's theory of science. It is from this basis that Schelting shows the importance which the problem of causal liability in history had for Weber, and from this that he clarifies the stress Weber laid upon the absence of valuations in science. Schelting also believes that the second side of Max Weber's theory of history is a consequence of his fundamental views. I personally, however, believe that the part which values play in the selection of historical facts is not consistent with these previous statements. There Weber is not the original thinker, but the follower of Rickert. Schelting, who himself belongs to the school of Rickert, tries in vain to find a unity between these different

tendencies of Max Weber's epistemological thoughts. He agrees with Weber in the main points, but he diverges from him in the theory of "understanding" where Weber leaves the track of Rickert. "Understanding" means for Weber empathy into the real psychological acts of other persons; while for Rickert and Schelting understanding is the grasping of an unreal "Sinngebilde." Schelting takes the stand of Rickert and thence develops a theory of the sociology of culture divergent from Max Weber's epistemological ideas.

M. A. G.

The History of Buddhist Thought. EDWARD J. THOMAS. (The History of Civilization, ed. by C. K. Ogden.) London: Kegan Paul, Trench, Trubner & Co., Ltd. New York: Alfred A. Knopf. 1933. Pp. xvi + 314. \$5.00.

One might infer from the title of this work that the Western history of Buddhist philosophy has at last arrived. Such expectation, however, is doomed to disappointment. The author is himself aware that such an account of inter-connected movements of thought as we have, say, in Windelband's *History of Philosophy* is as yet an unattainable ideal for the area of Buddhistic reflection. Too much spade-work yet remains to be done. His aim, rather, is "to trace the growth of the Buddhist community, to indicate its relation to the world of Hindu and non-Hindu society in which it arose, and to follow the rise and development of the doctrines from their legendary origin into the system which has spread over a great part of Asia" (p. xi). The volume is a natural continuation of Dr. Thomas's *Life of Buddha as Legend and History*, which dealt with legendary and earliest historical aspects of the movement. Here as there, attention centers upon the Indian development as revealed in Pāli and Sanskrit sources. The limitation is obvious. Chinese and Tibetan translations figure for the light they throw upon the Indian situation, not for what they reflect of their own respective communities. Any final story of Buddhist philosophy will have to include as a matter of course the East Asian emphases as well as the Indian phases. For it is in the Far East that Buddhism has after all persisted and carried out its fullest development. Within the area chosen, however, Dr. Thomas has made a valuable contribution.

In the first half of the volume the reader finds clear and illuminating analyses of the familiar dogmas of Buddhism as an early religion. The ethical character of its ascetic ideal, the divergence of early schools, its traditional use of yoga practice, its original concepts of causation, non-self, karma and nirvāṇa, are all discussed in the full light of significant, if at times conflicting, interpretative hypotheses of special scholars such as Oldenberg, Keith, La Vallée

Poussin, Jacobi, Schayer, Franke, Colebrooke, and others. The section forms a good introduction to problems and possible solutions involved in early dogma.

Philosophical interest proper begins with Chapter XII on "Developments in Abhidhamma" and continues to the end. Unfortunately for the philosophical reader Dr. Thomas's method, which requires inclusion of considerable historical and textual matter, limits him at first to bare detection and statement of positions without the enlargement of significance which discussion brings. Thus the catalogue of elements of existence (pp. 162-163), the brief account of the Sarvāstivādin theory that "everything exists" (*sarvam asti*), and the attempt to solve the problem of time by the doctrine of "momentariness" (*kṣhanikavāda*) (pp. 164-165), are immediately intriguing but left unsuggestive. More satisfying treatment is accorded the religious concepts of the Buddhas and Bodhisattvas as developed in the advanced scriptures such as the Lotus Sūtra. They embody the major change from the Buddhism of the Hīnayāna or "low career," the term by which thinkers of the "great career" (Mahāyāna) characterized the earlier system. Religious possibilities of this new way of devotion to "saving all creatures" are impressively set forth in a sympathetic treatment of Śāntideva, the Thomas à Kempis of Buddhism.

More truly philosophical subject-matter and treatment are found in the chapters on the doctrines of the "Void" (pp. 212-229) and of "Consciousness-only" (pp. 230-248). Dr. Thomas here deals with the metaphysical bases of the Mahāyāna system and has at hand the results of the more recent labors of Stecherbatsky, Rosenberg, Suzuki, and La Vallée Poussin. What is known as the Mādhyamika doctrine taught by Nāgārjuna starts from the standpoint of logic and by showing the impossibility of finding any perceptual or conceptual determination free from contradictions concludes that the ultimately real can be characterized only as the Void. Mystic intuition alone can apprehend its highest truth (*paramārtha*). All distinctions of other experience are only relative or conventional truth (*saṃvṛti*). What is known as the Vijñānavāda, or "consciousness-only" doctrine, takes the more positive position that the ultimately real is a fundamental "store-consciousness" (or receptacle-consciousness), thus yielding a metaphysical idealism curiously suggestive of some modern reflective experiments in the West. The accompanying theory of knowledge found in the Lankāvatāra Sūtra seeks to show how the world as ordinarily experienced is due to a transformation of consciousness resulting in "false imagination." Hence perfected knowledge can be attained only by a reversal of standpoint which is the realization that everything is consciousness-only.

Dr. Thomas's volume will be welcome to many readers seeking to thread their way through the labyrinth of Buddhist ideas. Its brief characterizations of the conceptions, always faithfully within sight of relevant texts and carefully documented, can not but be useful. The advanced reader, having gained the perspective of the book, may well go on to the specialized researches of the technical scholars in Mahāyānist philosophy where the impressive details of the problems are faced.

CLARENCE H. HAMILTON.

OBERLIN COLLEGE.

Philosophical Ideas in the United States. HARVEY GATES TOWNSEND.
New York: American Book Company. 1934. v + 293 pp.

This survey of American philosophy marks a notable advance over the works of Riley. Professor Townsend has not only embodied the gleanings of Woodbridge Riley's pioneer efforts, but has profited by more recent historical inquiries and interpretations, especially by Professor Cohen's essay in the *Cambridge History of American Literature*. In place of Riley's rigid "isms" his classification of the phases of American thought into four periods (the British tradition, French influence, German-American romanticism, and the "American period of conscious, professional philosophy") is less artificial. His treatment of each philosopher in turn, however, suffers somewhat from a too narrow interest in "conscious, professional philosophy." Each philosophy is expounded in terms of its contributions to "the four philosophical problems" of epistemology, metaphysics, ethics, and esthetics. Within the limits of this scheme the work is clear, informative, and careful. The chapters on Royce and Peirce are especially good and reflect the author's enthusiasm and thesis. In the metaphysical idealism and logical realism of these two men American philosophy, according to Professor Townsend, reaches a culmination as well as a promising point of departure for future growth. His comparison of the philosophies of Jonathan Edwards and Charles S. Peirce is interesting and suggests a fresh historical perspective, at which both of these philosophers would undoubtedly turn in their graves. The chapter on the Academic Tradition might well have begun with John Witherspoon and Timothy Dwight; for as it is, these reverend gentlemen find themselves with Tom Paine in a chapter devoted to the absence of philosophy during the Revolutionary period. The inclusion of brief accounts of men like Rauch, Lieber, Bledsoe, Stallo, and Davidson is a valuable feature of the book, as is also the reprinting of a contemporary account of the rise of American transcendentalism by James Murdock. The bibliography contains an excellent guide to the recent literature.

H. W. S.

Mind and Nature. HERMANN WEYL. Philadelphia: University of Pennsylvania Press. 1934. vi + 100 pp. \$1.50.

In these five lectures delivered on the William J. Cooper Foundation at Swarthmore, Professor Weyl once more develops his interpretation of the rôles of positivism and apriorism in scientific knowledge. His thrice familiar thesis is that objective reality, understood in the Kantian sense as that which is universal, can be rendered to mind only through *a priori* symbolic constructions carried on within a "free realm of possibility." For sensory experience yields images, not knowledge; the latter involves free theoretical constructions upon which the experienced qualities must be strung. Professor Weyl accepts Müller's doctrine of specific energies, and so holds sensory qualities to be subjective. On the basis of a causal theory of perception he argues that elements of sensation, when properly represented by freely manipulable signs, have a structure which is isomorphic with their imputed but essentially unintuitable causes. On the other hand, scientific theories are bare formulae without *actualité*, until united in the activity of the ego with the subjective sensory qualities. And so the conclusion is obtained that scientific activity involves a far-flung constructive activity, so that only a whole system of science has physical meaning; that the world never exists independently of consciousness, but only as object for subject; and that the objective world is without history or process, being revealed under a spatio-temporal form only to the intuitive imagination.

The present book is freer from theological preoccupations than some of Professor Weyl's other writings on the philosophy of science. Much of the doctrine is common to analytical positivists, and Kantian and Fichtean idealists. As one would naturally expect from such a distinguished scientist, he has ingenious and wise things to say about the fields of which he is a master. But in spite of his great erudition, his arguments for general philosophic positions are cumbersome, often unsound, and frequently irrelevant. By no stretch of the imagination can this series of lectures be regarded as shedding illumination upon the problems of philosophy or as contributing fundamental analyses of contemporary scientific concepts.

E. N.

Personal Ethics. B. H. SREETER, K. E. KIRK, J. P. R. MAUD, C. R. MORRIS, R. L. HALL, R. C. MORTIMER, J. S. BEZZANT. Edited by KENNETH E. KIRK. Oxford: At the Clarendon Press. N. Y.: Oxford University Press. 1934. Pp. xi + 181. \$2.00.

This book consists of seven popular lectures delivered in Queen's College Hall, Oxford, in 1933, by dons (and one student) from six

Oxford colleges. There was no consultation in advance: "each followed his own bent." But all began with much the same premises; and all have maintained a high level of urbanity, lucidity, and polite conventionality. The "personal ethics" of the title, as the editor remarks, includes "much which in earlier days might well have been called 'public' or 'social' ethics," a distinction more common in England than elsewhere. The aim of throwing light from academic sources upon "practical ethical problems" is praiseworthy indeed; but much of the advice given is too parochial to be enlightening to non-Britishers, and it often amounts to little more than a defense of the modern Anglican position on each issue. Canon Streeter deals with education in terms that are almost wholly insular. Professor Kirk gives a respectful hearing to some of the contemporary heterodox views of marriage, only to conclude that "there can be no half-way house between frank libertinism and the Christian view of sex." Dean Maud involves himself, with laudable candor, in many thorny difficulties concerning patriotism, deciding that a citizen has two duties: that of "helping to make the policy and laws of the state what they ought to be," and that of "obeying the law in such a way that the evil effects . . . even of just laws, do not follow." He recognizes that the two duties may conflict, and seems to leave room for the conscientious objector. Disinterestedness and knowledge are the foundations of true patriotism, which should render a man "more capable of loving other countries as he loves his own." The chapters on economic questions are disappointingly timid and cautious, especially Dean Hall's on "Earning and Spending." Mr. Morris of Balliol skilfully disentangles social and economic class distinctions, seeming nevertheless to recognize "the terrible power of wealth to cleave society"; but argues weakly for the gradual diminution of such inequalities through the broadening of education. A student of Christ Church, Mr. Mortimer, dissects British gambling and finds it a legitimate amusement within limits, but actually overdone. Hence "our duty towards the weaker brethren" demands that we gamble only in private and in moderation. In the concluding chapter on "Ethics and Religion," Canon Bezzant weighs the evils of non-moralized religion and non-religious ethics, and finds the latter far more serious. Only in the setting of living religion, he maintains, do the teachings of ethics "attain maximum influence."

H. A. L.

Das Problem des Todes in der Philosophie unserer Zeit. JOACHIM WACH. (Philosophie und Geschichte, 49.) Tübingen: J. C. B. Mohr. 1934. 48 pp. 1.50 M.

The title of Wach's treatise is misleading; it promises too little and too much. Too little, because Wach does not deal with con-

temporary philosophy only, as the title suggests, but also with Schopenhauer and Feuerbach. It promises however at the same time too much, since Wach confines himself to German philosophers. On that account Heidegger's philosophy is dealt with in a special chapter, while Kierkegaard, who is Heidegger's source, as Wach himself admits, is only mentioned occasionally.

The development from Schopenhauer to Heidegger is a development from the metaphysical interpretation of death to an existential one. For Schopenhauer individual existence is a guilt of the absolute and therefore the end of the individual in death a reunion with the impersonal substance of the world. Feuerbach's theory, in contrast to Schopenhauer, is a contradictory combination of universalistic and individualistic ideas. For Feuerbach also, death is a transition of the individualistic mind into the general mind and therefore death leads up into a higher form of reality. On the other hand every moment of human existence has for him its own infinite significance. With Simmel the modern approach to the problem of death begins. Death is no longer considered as a relation of the individual to the absolute, but as a happening in the life of the individual itself. The transcendental character is immanent to life itself. Every life is in itself "more than life." Therefore post-existence is not Simmel's problem, but the shaping of life with reference to death. Heidegger goes even further in this direction. The fear (Angst) of death is for him a metaphysical feel—in which we grasp the absolute; the isolation of the individual in the hour of death, the "Vorlaufen zum Tode," are the subjects of his analysis. This means that he goes back to Christian problems and Christian ideas (not in vain is Kierkegaard the father of his ideas) without preserving the relation to a personal God.

M. A. G.

OTHER NEW BOOKS AND JOURNALS

THE PHILOSOPHICAL REVIEW. Vol. XLIII, 5. Notes on the Theory of Ideas: *Theodore de Laguna*. Royce's Philosophic Method: *D. J. Bronstein*. The influence of Descartes on Berkeley: *T. A. Kantonen*. Some New Aspects of an Old Problem: *John Macdonald*. Discussions—The Definite Description: *A. Ushenko*. A Note on Bronstein's and Tartar's Definition of Strict Implication: *J. C. C. McKinsey*.

RIVISTA DI FILOSOFIA. Anno XXV, N. 3. La filosofia di Giulio Lachelier (1832–1918): *P. Martinetti*. I problemi dell'infinità numerica e dell'infinitesimo in Aristotele: *R. Mondolfo*. Il problema e il metodo della critica gnoseologica secondo Davide Hume: *E. De*

Michelis. Conoscenza matematica e conoscenza filosofica: *L. Geymonat.*

ERKENNTNIS. Band 4. Heft 3. Kausalität, Biologie und Psychologie: *Paul Jenser.* Quantenphysikalische Bemerkungen zur Biologie und Psychologie: *Pascual Jordan.*

BULLETIN DE LA SOCIÉTÉ FRANÇAISE DE PHILOSOPHIE. 33^e Année, No. 4. L'enseignement Philosophique et la Réforme Scolaire de Demain. Thèse: Marc-André Bloch. Discussion: M. Bénézé, H. Bouchet, E. Halévy, P. Hunziker, R.-E. LaCombe, A. Lalande, Ed. Le Roy, D. Parodi, H. Piéron, G. Rodriques. Lettres de H. Bouchet, H. Lenoir, J. Wahl.

SCIENTIA. Vol. LVI, N. CCLXIX-9. La notion de complexité comme principe de méthodologie scientifique: *J. Malfitano* et *A. Honnelaitre.* Ueber Gebirge und Gebirgstypen: *G. Braun.* Colour Vision: *W. Burridge.* Etnografia e storia: *E. De Michelis.*

THE NEW HUMANIST. Vol. VII, No. 4. H. G. Wells: Chronieler, Philosopher and Seer: *C. H. Grabo.* Redefining God: *Charles Hartshorne.* What is Meant by Cosmic Purpose? *E. E. Aubrey.* The New American Feudalism: *E. A. Stokdyk.* Democracy or Fascism? *C. R. Decker.* Bernhard Bavink and the Personal Equation: *M. B. Visscher.* Evolution and Human Values: *Bernhard Mollenhauer.*

Haller, William, editor: Tracts on Liberty in the Puritan Revolution, 1638-1647. New York: Columbia University Press. 1934. 3 vols. Volume I, Commentary. Volumes II-III, Facsimils. \$12.50.

Miller, J. Hillis: The Practice of Public Prayer. New York: Columbia University Press. 1934. xvi + 198 pp. (An empirical approach to the theory of prayer.)

NOTES AND NEWS

From Italy comes the announcement of a new series of editions of philosophical classics or critical expositions of them. This series under the title "Collezione di Studi Filosofici" is edited by Carmelo Ottaviano and published by the Casa Editrice Rondinella Alfredo, Naples. The first two numbers to appear are *La Metafisica del Bello e dei Costumi di Arturo Schopenhauer*, expounded by Aurelio Covotti and a translation of Leibnitz's *Discorso di Metafisica* with introduction and critical notes by Michele Giorgiantonio. A. Covotti: *I Presocratici* is in press. The *Collezione* comprises two series: the one called Serie Teoretica e Storica is composed of critical works by Italian scholars; the other is composed of critical editions of classic texts.

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Spinoza and Locke by Frederick J. E. Woodbridge and Sterling P. Lamprecht. (Two tercentenary addresses reprinted from the *Columbia University Quarterly*.) 29 pp. (paper cover) 40 cents.

The Book of Diogenes Laertius. Its Spirit and Its Method by Richard Hope. (Columbia University Press, 1930.) xiv + 241 pp. \$3.50.

Telesio, The First of the Moderns by Neil C. Van Deusen. 90 pp. (paper cover) 75 cents.

Montaigne's Philosophy of Human Nature by J. V. Mauzey. 98 pp. \$1.00.

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Aristotle's Theory of the Infinite by A. Edel. 102 pp. \$1.00.

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MONISM AND PLURALISM

THE following is an attempt to formulate as clearly as possible exactly what the issue is between monism and pluralism. At the outset three paths present themselves. The antithesis may be:

- (1) An objectification of emotional strivings.
- (2) A difference of attitudes on the part of investigators in special fields, which lends a certain bias to their general approach and is applied analogically to the whole universe. As such, the correctness (if this has any meaning) of the attitude implies the existence of a corresponding type of structure in the subject-matter.
- (3) Assertions purely about the *relation* of domains or fields of subject-matter.

It would be arbitrary to claim the antithesis for any one of these alternatives since historically it has found exemplification in all, nor to hold to a strict distinction between them in all respects. The existence of emotional strivings *may* tell us something about subject-matter; differences of attitude are often genuinely indistinguishable from general hypotheses about special realms, and assertions about the relation of domains must hold true of partial domains whenever any realm is broken on some basis into relatively independent parts. I merely suggest the three, then, as between them exhausting the emphases that have been placed on the antithesis which I am attempting to clarify. I shall, accordingly, consider them in order.

(1) What the exact nature of the desire for unity and difference may be in human beings, which is projected upon the universe as monism or pluralism, we leave for the psychologist to enunciate. Perhaps in the individual the desire for unity represents the developed impulse for an integrated character as against the force of variegated somewhat incompatible desires; socially, the struggle in a man of the censor or dominant social code, as against the systems based on elements of a man's nature unsatisfied by it. In any case, it tells nothing about the world and its realms unless we posit some additional assumption, as Plato does, for example, when he argues that men's desire for knowledge together with their inability to attain sufficient in one life, implies a set of other lives. Hence if a theory of monism or pluralism is solely a matter of the emotions, they may very well be William James's "tender-minded" and tough-minded,"

respectively. Neither would be *essentially* related to religion, since the same cleavage would be found within types of religions. Nor would there be a *necessary* relation between either and participation in social conflict, though on the whole, perhaps, monism with its frequent identification of the real and the good might point towards acquiescence. It might equally well, however, encourage the rebels against some finite evils, to feel the cosmos fighting side by side with them—against enemies having the metaphysical status of unreality.

(2) In our second sense of the opposition, monism and pluralism as antithetical have their basis in attitudes or hypotheses of order in investigating special fields, or ways of explanation which are called monistic and pluralistic explanation. Their types might be clarified by a few illustrations:

(a) In the realm of culture, monistic explanation would consist in assigning to one factor responsibility for the character of a culture, e.g., the economic factor, or diffusion, or the spirit of the times. An absolute pluralism is more rarely found; theoretically it would be explanation in terms of two or more completely independent forces, e.g., the forces of good and evil, or mind against matter, where the identity of each is kept intact (though the nature of their interaction always constitutes a problem). There is, of course, a third type of explanation which might be called indifferently relative monism or relative pluralism. It would deny that any specific analysis could be performed in terms of one factor, and equally well that what was found in this context to be one of the plurality of factors was itself incapable of a similar analysis. It would interpret the diverse factors with monistic pretensions as heuristic principles whose domains of usefulness were not sharply distinguished. Diffusion, the economic factor, the spirit of the times, etc., are really general hypotheses in the realm of culture, to be given a specific content in special situations. In each situation their relative importance might be guessed at, but *generally* the judgment of the all-importance or even dominance of any one would have little significance, and that (which would be statistical) only on a host of omissions and assumptions. On the other hand, relative monism would find the sharpness or absoluteness in any pluralistic explanation to lie only in the fact that the two factors were distinct in definition, e.g., matter in essence or abstraction is not mind, and mind is not matter. But in any situation which is broken up into the mental and material factors, if for instance the mental be itself analysed, part of its character will be what it is because of material, and part not explicable thereby. If we analyze the situation in which a man drinks wine in a restaurant simply into the

satisfaction of a desire and the wine by which it is satisfied, though "desire" and "liquid" remain eternally divorced as "mental" and "material," nevertheless the analysis of his having the desire then and there would be in terms of material factors (past physical behavior), social tradition (perhaps a public post-prohibitional impulse to liquor), and past individual thoughts. In short, while the plurality of factors in abstraction might be absolutely opposed to one another, they cease on this position to be regarded as forces, but are considered abstract polar categories in any particular analysis, absolutism being rendered impossible by the fact that what in the specific analysis comes under any one category is itself capable of the same *whole* analysis. Even more, on some theories of meaning this would entail the denial of absolutism in abstraction as well.

(b) In politics the problem of sovereignty furnishes a good illustration. Monistic explanation would seek the ultimate source of sovereignty and find it in the ruler or in the people; for instance, in the people's real will whether they know it or not on any occasion. A pluralist might find it to lie in the independent individuals composing the society, and society itself to rest upon their implied independent consent. A relative monist or pluralist would deny that sovereignty as such lies anywhere; rather, particular bits of sovereignty lie in diverse places. That is, in any society there are definite patterns (whether legal or habitual) of obedience for diverse matters. In each of these the ultimate say-so lies somewhere, but not for all does it lie in the same place. There is no single power over everything, no ultimate plural power over the same thing.

(c) In physics, I take it, the problem would be whether there was any ultimate kind of force or mode of behavior to which all instances of force or physical behavior would be reducible. The course of development in the science has indicated that if we refer to the units used there is such a monistic reduction; if, however, we refer to the explanation of any special bit of existence we need at least two forms of this force or behavior. This particular gravitational pull x requires this particular inertial force y in the analysis of that situation which is the resultant behavior. Now x and y may themselves each be analyzed in the same way. Even where only one unit is used, there is always required for explanation the category of position of those units.

(d) Ethics likewise furnishes a good example. Monism here may be represented by a thorough-going hedonism, which would find all value to lie in a maximum of pleasure; pluralism by the view which asserts an irreducible plurality of ultimate goods; relative monism or pluralism by that kind of naturalism which recog-

nizes that in every situation in which choice occurs there are several impulses involved, and finds the good to lie in their harmonious maximal expression. Here neither the single impulses are the good nor the harmony alone, but the impulses as harmonized. And where we come to value harmony itself, it is mostly as an anticipation of its material content or as the expression of a developed habit.

The last example I have given shows very clearly in addition the difference between the kind of unity insisted upon in monism, and that in relative pluralism.¹ This question merits a digression because it is often felt, especially by those speaking vaguely, that ultimately, after all, there must be some kind of unity in this "blooming, buzzing confusion," which we call the universe. In hedonism the unity of the good is one of substance—various goods are good because they are substantially the same, i.e., various units of the same thing, goodness or pleasure. This need not be measurable, but may exist in the same sense in which different reds are red. For naturalism, various goods are good only *analogically*, that is, by exhibiting the same set of highly formal relations. Two completely differing sets of impulses harmoniously expressed would each if they constituted self-contained systems, be called good. And yet, as I have pointed out, not the harmony but the impulses in harmony constitute what is good. Or perhaps the difference might be indicated more clearly thus: a surplus of pleasure over pain, if it be the substance of the good, constitutes a set of conditions *directly* applicable to all instances or types of events whose goodness is questioned; the general principles of a naturalistic account, on the contrary, require constant interpretation in terms of the impulses at issue and the kind of harmony appropriate, which then set the standard of goodness in that special realm. In the first case, therefore, we have, so to speak, the genus "pleasure" and its species; in the second we have only a number of types with certain formal properties. The second is the type of unity relative pluralism expects to find in general; the first is appropriate to at least one type of monism. Thus Aristotle very clearly registered his opposition to monism when he said over and over again that various cases of Being, Goodness, and Unity were one only analogically; for Being, Goodness, and Unity are not genera. No genus is predicable of the differentia in a definition (rational is not an animal); but every element of a definition *is*. Therefore Being is not a genus. Nor are the categories considered by Aristotle to be its species. Quality

¹ Hereafter I shall use the term "relative pluralism" to mean what I have hitherto indicated by "relative monism or relative pluralism." The choice of abbreviation is vindicated, I think, by the need of contrasting it with monism—the more formidable of the two extremes between which it strives to maintain a restrained position.

is not Being qualified; for Being could be predicated of the qualification. In short, whatever belongs to any and every thing is not very useful for distinguishing the special traits of things.

The consequences of this distinction reveal its importance. In the *Posterior Analytics*, for example, Aristotle affirms that the basic propositions of a science must be appropriate to it, that is, expressed in terms of its special subject-matter. Thus the fundamental rules of proportion must be stated in geometry as holding between continuous magnitudes, and in arithmetic as between numbers. The reason, I suppose, is that even if one has a general theory of proportion, for it to be applicable to this special realm, one would have to show that the subject-matter satisfied the conditions implied in the theory. (Even if the theory held for all entities, we would require the proposition, "This is an entity.") Hence, since the special assumptions can not be omitted, as far as the special science is concerned the basic propositions might as well at the outset be stated in terms of its own subject-matter. In modern terminology, if a set of uninterpreted symbols is given any interpretation, it must be shown that the latter satisfies the conditions specified. For example, if $a \times b = b \times a$, I can not substitute "father of" for \times . Now if there are any formal properties characterizing *anything* that is, these can scarcely constitute the essence of a monistic system unless the upshot of monism is that there is only one logic, that in every situation there is potentiality and actuality, unity and plurality, etc.

Hence if monism means that the universe is somehow a single system it can not rest its case on the fact that things that are possess being in an analogical sense. It follows that even if monistic explanation were correct in any special realm, there would be no reason to conclude that the universe is in any significant sense one. Similarly, even if absolute pluralism prevailed within a realm, the many factors *might* yet be shown to be special instances of some more fundamental factor not entering as such in the realm, e.g., as atomic motion is not a part of moral science. Finally, if relative pluralism be, as I think it is, the correct attitude in special domains, we can not also infer from this that monism and pluralism are false doctrines, unless we assume in addition that the sum total of human knowledge lies in the *special* sciences. Then there might still remain the possibilities of inference from the character (e.g., as finite) of knowledge itself.

(3) We turn, therefore, to the third path of the clarification of the issue—the proposed assertions about the relation of realms. These fall roughly into three divisions: (a) Arguments to show that the universe is a single genus or of a single stuff, or that it is an absolute plurality of stuffs. (b) Arguments to show that the universe is a single determined system, or that it is absolutely diversely

determined. (c) Arguments to show that even relative pluralism as a method implies monism as a metaphysics.

(a) There is first of all the sophistical contention that difference means difference within a genus. Therefore pluralism or the doctrine of absolute differences contradicts itself by implying an absolute genus in which there should be absolute differences.² The reply would be that otherness means simply having a different formula or definition, so that much of the world is "other" to the rest; the only genus implied need be formula or definition, in which the differences occur. So that, unless monism means "in the beginning was Definition," this whole argument, even if true, proves nothing, or refers again to what is in an analogical sense.

Mechanical materialism and subjective idealism are both monisms in the sense of affirming a single stuff for the world, though in both there is a plurality of what is made out of the stuff. As has, however, so often been pointed out, both end with the same distinctions they sought to override, and so are essentially identical as descriptions of the world, and at that not monistic. Mechanical materialism posits diversity of organization of its units; Berkeley finishes up with a distinction between ideas in our power and those not in our power. The truth of the mechanical materialistic position lies in its claim that we can discover a form of behavior which everything treated in a certain way will manifest; but this treatment entails selection. The truth of subjective idealism would lie in the claim that whatever is to be known as being must eventually rest on sense-perception. But the inclusive monism of each is an instance of a loss of self-restraint.

An absolute pluralism of stuff, in the above sense of ultimate stuff, is not inconceivable, though empirical evidence renders it less probable. Here there would be at least the analogical unity which would lie in the plurality's capacity of being known.

(b) In turning to the question of determinism we come to what has sometimes been considered the core of the problem. Here the claim of monism is that the universe has the interconnectedness of a logical system; of pluralism, not merely that this is unproven, but that there are absolutely unrelated systems. For monism accident is only a sign of limited knowledge, for pluralism the indication of a real gap in connectedness. Now if accident is always relative to a

² Cf. Bradley, *Appearance and Reality*, pp. 519-520:

"Reality is one. It must be single, because plurality, taken as real, contradicts itself. Plurality implies relations, and through its relations it unwillingly asserts always a superior unity. To suppose the universe plural is therefore to contradict oneself, and, after all, to suppose that it is one. Add one world to another, and forthwith both worlds have become relative, each the finite appearance of a higher and single Reality. And plurality as appearance (we have seen) must fall within, must belong to, and must qualify the unity."

system of preferential relations, then monism must be the assertion that there is such a system as to necessitate everything that is the case; for instance, given a set of units (material or spiritual) and their present distribution and the laws of their behavior, any so-called future event will determinately be the case or determinately not be the case. (Aristotle had asserted that only the disjunction was now true but neither disjunct itself.) Pluralism would be the assertion of an absolute plurality (whatever the number) of systems, each covering a portion or aspect of events. Here, again, enters a sophistical objection of monism to pluralism. "Let us," it will say, "constitute a single system out of the many you propose, adding together the fundamental assumptions to form a single set; for they surely can not be contradictory." This suggestion would not in the least affect the issue; for in this way whatever was not contradictory would be called one. Really, however, to hold its ground monism must maintain that if any one of the assumptions in the system were altered we would get either complete contradiction or *every* consequence completely different. In short, monism is committed to the view that if anything in the world were different everything else would be different. Pluralism asserts that there is at least one system or aspect, etc., such that if everything else were different, it would remain the same.³ Hence pluralism has been addicted to sharp distinctions, usually however with some reservations. Zoroastrianism separated good and evil metaphysically—but good was bound to prevail in the end. Christian theology would have admitted that the free choice of the sinner or saint was such that it could remain the same even if everything else were different; but at the same time God was all Being and Truth and Goodness. Cartesian dualism was fairly uncompromising, except when it began to tinker with the pineal gland; and even Leibnizian monadism required as a barrier against solipsism, a pre-established harmony. The psycho-physical parallelism is no genuine pluralism, for it can not claim that a given idea would remain in a given mind even if all bodily conditions were altered. Yet surely this is what an absolute pluralism in the mind-body problem is committed to: mind *A* possibly retaining idea *X* even if body *A'* were to perish. Naturalism (Santayana's variety in the *Life of Reason*, for instance) is not an absolute pluralism; for no idea has exemplification unless there is an arrangement of forces appropriate to it. The natural and the ideal are categories of products of analysis out of the flux.

Absolute pluralism does not, therefore, merit our further consideration, simply because we are not ready to follow its commitment.

³ E.g., Wittgenstein, *Tractatus Logico-Philosophicus* 1.2 and 1.21: "The World divides into facts. Any one can either be the case or not be the case, and everything else remains the same."

ment that there is at least one aspect or system which could be the same even if every other were different. Nevertheless it might be possible to create a consistent absolute pluralistic philosophy constructed in such a way as to explain the course of history; yet it would certainly involve surplus baggage of *ad hoc* hypotheses.

Absolute monism seems to have a greater appeal, in part, I think, because it would entail our estimating seriously every single act of ours, since there will be next to nothing the occurrence of which is indifferent. And in many cases it is a habit of responsibility, engendered in childhood, which lingers on. Hence people are readier to face, and even if necessary to accept, the consequences of theoretically complete determinism with the feeling that *practically* our necessary ignorance will keep us going without pessimism. Add to that an ignorance theory of probability and the zest of a gambler, and even a monist may have a happy life.

"If we were to look from above," says the hero of *Berkeley Square*, "we would behold Time spread out and flowing like a river—past, present, and future flowing on in one. And we could then see around the bend, which the boatman can not do." Most arguments which pass from the admission of accident being relative to a system of preferential relations to an absolute monism, rely upon an appeal to our ignorance. Perfect knowledge would entail a grasp of *all* systems, hence a prediction of the totality of any event. The argument is certainly correct, but it is hypothetical in character, and the possibility of its antecedent is exactly the question at issue. If there were perfect knowledge, the result would follow. But (i) is the result absolute monism? And (ii) is perfect knowledge *theoretically* possible?

(i) The result is not necessarily absolute monism since the kind of system resulting is a composite of several systems possibly such that any *one* might be different and the rest the same. Complete determinism is therefore independent of monism.

(ii) Perfect knowledge implies the perfectly knowable or intelligible; hence if perfect knowledge is theoretically possible, the world is through and through intelligible, i.e., whether absolutely monistic or not, constitutes a completely determined system; which is exactly the question at issue. The appeal to a transcendental omniscience, even if qualified by the phrase "suppose there were," is a *petitio principii*. This is, of course, no disproof of the position at stake. We must, therefore, turn to the evidence involved, that is, examine the method used in gaining knowledge, and see what its implications are, if any.

(c) Different theories of the nature of scientific method are the result of an initial pluralism, relative pluralism, or monism. Pluralism would find congenial to it a belief in the existence of atomic

facts, verified once and for all in some immediate experience. Relative pluralism maintains that in any verifying situation there are always assumptions unquestioned within that context, but always capable of submitting to verification themselves in terms of their own consequences with the admission of fresh assumptions. In any verifying process there will always be something necessarily taken as known (hence no absolute pluralism), but it will not be necessary to assume everything (hence no absolute monism). That we can not transcend this method, is, if I understood it aright, the claim of relative pluralism against a monism insisting that nothing could finally be verified short of an apprehension of everything.⁴ But it is more than an inability of ours which is maintained. It is the assertion that in the analysis of any problem or situation there are *always* some things in the world relevant, and there are *always* some things irrelevant. This is not a self-evident truth, but a general hypothesis whose verification lies in our finding in *particular* situations that certain *particular* things are relevant and other *particular* things are not relevant. (By thing, I mean also characteristic.)

Can we, then, argue from the assertion of relative pluralism as the most reliable method (if such it be) to some propositions about the structure of the world other than that it must be such that this method is possible and successful? Some may suggest time as the factor which makes monism impossible and gives a fleeting and unfinished character to this world. But surely time is secondary to change or process. Like space, causality, finite, infinite, it is a concept of immanent origin and application, i.e., it arises from diverse interrelations of portions of the world, and may have no possible application to the world as a whole. Even change or process itself, as we know it, is only the common character of all changes or processes. This is a pretty tenuous one, from the formal point of view. As Aristotle found, it consists only in there being a beginning, an end, and an underlying identity, a subject or group of subjects. (Materially, of course, the common character of all changes is a question for the science of physics.) But to argue that the World has as its essential character (nay more, its total character as Reality), what is only a particular kind of change or rather an abstract character of known processes, that they are known or experienced, seems to me the peculiar lack of restraint which characterizes philosophers like Bradley. This with all deference to his statement (*Appearance and Reality*, p. 518) that "There is no other view, there is no other idea beyond the view here put forward. It is impossible rationally even to entertain the question

⁴ For an exposition and defense of relative pluralism, see Ernest Nagel, "Verifiability, Truth, and Verification," in this JOURNAL, Vol. XXXI (1934), pp. 141-148.

of another possibility." He protests against the "senseless attempt to transcend experience," which in itself seems reasonable enough. But to conclude (p. 522) that "Reality must be therefore, one Experience," seems unjustified if it means anything more (and for Bradley it does) than that everything we experience is one analogically, possessing the character of being experienced. This would leave no ground for his doctrine of degrees in reality and truth, which he calls (p. 487) the fundamental answer to the problem, according to which the unity in all appearances would thereby be the degree of Reality they possessed. "The Absolute is its appearances, it really is all and every one of them" (p. 486). It is each and all, but not any one of them, nor all equally, but one appearance is more real than another. Bradley's justification of his view is that the world has no independent factors, but each of itself "implies and calls in something else to complete its defects" (p. 457). We may note three points: (i) that to call in *something* else is not to call in *everything* else. (ii) That in showing how all appearance is riddled with contradiction he himself transcends experience in a sense equally vicious with the sense he condemns; for he takes as absolutely distinct in existence what appears distinct absolutely only in definition. This is a characteristic idealist procedure. (iii) He himself admits (p. 457) that "there are main aspects of the universe of which none can be resolved into the rest . . . in relation to the Absolute they are all alike essential and necessary." And again (p. 511), "The fact of appearance, and of the diversity of its particular spheres, we found was inexplicable. Why there are appearances and why appearances of such various kinds are questions not to be answered. But in all this diversity of existence we saw nothing opposed to a complete harmony and system in the Whole. The nature of that system in detail lies beyond our knowledge, but we could discover nowhere the sign of a recalcitrant element. We could perceive nothing on which any objection to our view of Reality could rationally be founded. And so we ventured to conclude that Reality possesses—how we do not know—the general nature we have assigned to it." All this is tantamount to the admission of a relative pluralism, plus a confession of faith.

Two more conceptions of monism merit notice—the Spinozistic and the Plotinian. If Spinoza's be interpreted as a pantheism, as it often wrongly is, then it is, like mechanical materialism, the belief in the pervasiveness of a particular kind of behavior to which all that happens is reducible. If it be the assertion that God is one and God is logic inherent in the Universe, it is as we have seen, far from a thorough-going monism. If it be that God is the Universe in all its totality, it is open to many of the objections we have raised

in general, and to its Bradleian descendant. If it means still something else, I do not claim to understand it. Of the One of Plotinus I can not speak, having never undergone the ascetic propaedeutic to immersion within it. Even if I had, doubtless the essential duality inherent in the understanding, that of the understander and the understood, would bar any report thereof.

To return then to the problem raised above, has relative pluralism any positive set of assertions to make in addition to its description of method and its criticisms of absolute monism and pluralism? I very much doubt whether it has. This is equivalent to the assertion that the World as such is no determinate subject of discourse. If it be treated thus, that is, if any proposition about it be given an interpretation in terms of existent entities, then the question of its truth or falsity is one for some special science. This holds true of all propositions like, "The World is finite," which means something akin to "A light ray will eventually bend back upon itself," and a host of similar consequences; or "The World is such as to support human values," which should mean that in the long run goodness is rewarded, etc. But if the World be taken to mean everything that is, no significant proposition can be asserted which will have as its predicate any term that we ever know or use. Yet surely even absolute monism and pluralism said nothing more than that certain consequences followed in the behavior or explanation of portions of the world. No more need be expected of relative pluralism.

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THE STRANGE CASE OF MODERN PSYCHOLOGY

TWO hundred years before William James wrote his *Principles of Psychology*, John Locke, who is sometimes referred to as the father of modern psychology, wrote as follows, in the introduction to his famous *Essay Concerning the Human Understanding*:

This therefore being my purpose, to inquire into the original, certainty and extent of human knowledge, together with the grounds and degrees of belief, opinion and assent—I shall not at present meddle with the physical consideration of the mind; or trouble myself to examine . . . by what motions of our spirits or alteration of our bodies we come to have any sensation by our organs, or any ideas in our understandings, and whether those ideas do in their formation, any or all of them, depend on matter or not. . . .

What makes this passage from the father of modern psychology so significant in relation to the work of the man with whose name two hundred years later its final emergence into the status of a

science is connected, is the fact that it is precisely those things with which Locke does not meddle which form the whole subject-matter of James's work.

"The physical consideration of the mind," "the alteration of our bodies," and "the motions of our spirits" in relation to the "sensations of our organs" and "the ideas in our understanding"; the dependence of "ideas," in their "formation," upon "matter"—these phrases form the table of contents of James's psychology. That with which Locke did not trouble himself, namely, the relation between the conditions of the human brain, on one side, and the contents of the human mind on the other, was exactly the thing which troubled James.

In his Preface¹ James writes:

This book . . . thereupon contends that psychology, when she has ascertained the empirical correlation of the various sorts of thought or feeling with definite conditions of the brain can go no farther . . . as a natural science.

Again:

I have therefore treated our passing thoughts as integers and regarded the mere laws of their co-existence with brain states as the ultimate laws for our science.²

Thus it may be said that psychology finally became a science by dealing with the very subject-matter which was excluded from it by its own reputed founder.

We see the same contrast if we place over against the work of James, not only that of Locke, but also that of Berkeley and Hume. The problem of these three thinkers was the problem of what might be called the quality of knowledge. What is knowledge knowledge of? What is the relation of man's knowledge to the external world? Is it possible for man to attain true and certain knowledge of anything? In short, what can I know? Such were the questions which agitated Locke, Berkeley, and Hume and presided over the birth of modern psychology.

They wished to answer these questions by examining the mind rather than the brain, in its mental rather than its physical (or its two-fold) capacity. They were aware that the mind had a physical capacity. Locke himself was a physician. But they did not think "the physical consideration of the mind" of importance in answering their questions. They felt that they could answer them by treating the human understanding for the most part in terms of ideas alone, without going very far behind these ideas to raise the question what sort of biological equipment they took place in and what sort of physiological processes they depended upon. They

¹ *The Principles of Psychology.*

² *Ibid.*

wished to find out how the human understanding constructs the edifice of knowledge out of bricks called "ideas" or "perceptions." They were not particularly interested in how the bricks were constructed. Where bricks came from? Yes. But not how bricks were constructed out of something that was not bricks.

Their whole strategy was to reduce the complex structure of human knowledge to its irreducible components, and then see what they could find out about such components. But they did not wish to reduce knowledge to something that was not knowledge. That would have been to give up the whole game because they were above all interested in testing the pretensions of knowledge *as knowledge*. Consequently Locke stopped the process of reduction when he came to simple ideas.

There are two kinds of parts into which something can be broken up by the scientific imagination: smaller units of the same quality (if we may use that word somewhat loosely) as the original thing, as when the game of tennis is reduced to certain strokes and certain rules of play. On the other hand we may reduce something to units of a different quality, as when the game of tennis is reduced to blood changes in the player. In the same way human knowledge can be broken up into its component "ideas" or "perceptions," in which case we have units of the same quality as itself, or it can be reduced to physiological processes in which case we are dealing with units of a different quality. In general, Locke and his followers choose the first way; James and his successors the second. James's question was not, what can I know? but, how do I know? His concern was not knowledge, but knowing.

Looking back at them both, one question which we may put to ourselves is this: does James's procedure solve Locke's problem? Can you find out about the certainty and extent of human knowledge by correlating thinking with physiological processes? Such does not seem to be the case. You do not begin to correlate thinking with physiology because you are interested in the certainty and extent of human knowledge. You begin to do so because you are not.

What, then, has happened to Locke's questions? For the most part, they have been left hanging. The logicians say they are psychology, the psychologists say they are metaphysics, and the metaphysicians deal with them when they do only because a metaphysician is likely to deal with anything.

Of course nothing is more common than a science, in the course of its development, passing on to new questions. But it is no such thing that we witness here. While James has his reasons for taking up new problems, it is not because the old ones have been solved. Quite the contrary. His tactic is to push on to new problems in spite of the fact that the old ones have not been solved. It is as if

he said, it appears that we can not have a science about the old questions. But we must have a science. Therefore, we will deal with new questions.

We accordingly find that James not only selects for treatment the very subject-matter which his predecessors deliberately ignored as extraneous, but he assumes "uncritically" those propositions, the question of whose truth or falsity formed the whole theatre of controversy from Locke to Hume.

"Every natural science," he says,³ "assumes certain data uncritically and declines to challenge the elements between which its own 'laws' obtain and from which its own deductions are carried on. Psychology, the science of finite individual minds, assumes as its data (1) thoughts and feelings and (2) a physical world in time and space with which they coexist and which (3) they know."

What an ignominious period is put to the labors of the fathers. It is no question of their being right or wrong. Their efforts are not even stamped with the mark of an honorable failure. Far worse. It would seem they were not dealing with the proper subject-matter at all. Under these circumstances one wonders whether we ought not to rescue them from this humiliating fate by ceasing to say that they had anything to do with the growth of modern psychology. But they did. That is what is so strange.

The strangeness of the case is by no means exhausted in its history from Locke to James. Its history from James to the present moment is, if anything, stranger still. There is this difference in the matter: James seems to have had some presage of the things to come, whereas Locke evidently had none.

"At a certain stage in the development of every science," says James,⁴ referring to the stage of development which psychology had reached in his own day, "a degree of vagueness is what best consists with fertility."

How true. James was so right one wonders if he could possibly have known how right he was. Bacon dreamed, in anticipating the potency of his new method, of the creation, not merely of more knowledge, but of new "knowledges." In like fashion we have witnessed in the past few years the extraordinary power of that vagueness of which James spoke. It has produced not only more psychology, but new "psychologies." We live in a day when books are published called "Psychologies of 1925," "Psychologies of 1930," and so on.

But it is not only in this indirect manner that James demonstrates his ability to foresee. He remarks:

Psychology is passing into a less simple phase. Within a few years what

³ *The Principles of Psychology*, Preface.

⁴ *Ibid.*, Chapter 1.

one may call a microscopic psychology has arisen in Germany, carried on by experimental methods, asking of course every moment for introspective data, but eliminating their uncertainty by operating on a large scale and taking statistical means. This method taxes patience to the utmost and could hardly have arisen in a country whose natives could be bored.⁵

The italics are James's, so that we may conclude he felt strongly on the point. Apparently he himself would have been bored by that sort of psychology, but by his own sort he was not. And we may safely add that his reader, too, is seldom bored. It must not be concluded, however, that unboreable authors necessarily produce boring psychology. Far from it. Contemporary psychology generally is exciting, or better perhaps, provoking reading, if only because of those queer things which its authors do, however tedious they may have been in the doing. However, no one will fail to recognize how characteristic it is of James to set up such a classification in psychology. There indeed is one of the "psychologies of 19—" which was not included in the collection: the psychology whose authors can not be bored.

Their success [continues James] has brought into the field an array of younger experimental psychologists. . . . There is little of the grand style about these new prism, pendulum and chronograph philosophers. They mean business, not chivalry. What generous divination and that superiority in virtue which was thought by Cicero to give a man the best insight into nature, have failed to do, their spying and scraping, their deadly tenacity and almost diabolic cunning will doubtless some day bring about.⁶

There is no doubt that James had the "grand style." He was himself able to combine business with chivalry. Yet how like "spying and scraping" his own physiological psychology would have seemed to Locke, Berkeley, and Hume. To trace out the correlations between mental phenomena and bodily changes, to have to become "something of a nerve physiologist": how complete a desertion of the heights of "generous divination" and "superiority in virtue" all this would have seemed to them.

To Hume for instance:

Here then is the only expedient from which we can hope for success in our philosophical researches, to leave the tedious lingering method, which we have hitherto followed, and, instead of taking now and then a castle or a village on the frontier, to march up directly to the capital or centre of these sciences, to human nature itself. . . . In pretending, therefore, to explain the principles of human nature we in effect propose a complete system of the sciences, built on a foundation almost entirely new, and the only one upon which they can stand with any security.⁷

It was with this lofty and ambitious spirit that Hume entered

⁵ *Ibid.*, Chapter VII.

⁶ *Ibid.*

⁷ *Treatise of Human Nature*: Introduction.

into his work (at the age of twenty-four). Here is a style even grander than James's. Here is a chivalry purer, more generous. The method that seems tedious and lingering to Hume is not the specialized spying and scraping within some particular science, as in the case of psychology, but the specializing of science itself into different sciences each laying its separate siege and fighting an independent battle.

Hume set out to explain human nature, to explain it in such a way as to lay a new foundation for all the sciences. The significant thing is that in his view an explanation of human nature could not fail to improve *the system of the sciences*. He still sees the nature of man (when his skepticism permits him to speak of such a thing as the human race) in understanding, in mind. He is still in that vein of thought which persisted, we might just as well say from the beginning, right up until the day before yesterday, in which the puzzle was why the mind should have a body. But we have come now to the point where we can not imagine why on earth the body should have a mind.

How human nature changes. It used to be that in which we differed from the animals. Now it is what we have in common with them. The body used to be explained, if at all, by the mind. Now the mind is explained, if at all, by the body. To deal with human nature and the mind of man by correlating thinking with physiology would have seemed to Hume quite the opposite of anything generous, chivalrous, virtuous, or grand. He would have felt towards James's *Psychology* somewhat as James felt towards the new generation which he foresaw. Let us return to his account of them, which stamps him a true prophet.

So it has come to pass that instincts of animals are ransacked to throw light on our own; and that the reasoning faculties of bees and ants, the minds of savages, infants, madmen, idiots, the deaf and blind, criminals and eccentrics are all invoked in support of this or that special theory about some part of our own mental life. . . . Messrs. Darwin and Galton have set the example of circulars of questions sent out by the hundreds to those supposed able to reply. The custom has spread and it will be well for us in the next generation if such circulars be not ranked among the common pests of life.^s

James saw what was coming. Far away as James is from Locke, these latter-day psychologists are still farther. They now look upon James much as James himself once looked upon Locke. He regarded Locke, as well as Berkeley and Hume as metaphysicians. And just the other day I was talking with a young psychologist who referred to James's *Psychology* as a "system of philosophy."

James is, of course, closer in spirit to the contemporary psychologist (if we may thus speak generally of such violently diverse indi-

^s *The Principles of Psychology*, Vol. 1, Ch. VII.

viduals) than he is to John Locke. The point has been well made⁹ that two psychologies may be found in the work of William James: one introspective, as in the immensely fruitful chapter on "The Stream of Thought,"¹⁰ the other physiological, as in the opening chapters of Volume I. Thus if we restricted attention only to method, we should find in the work of James one line connecting him with the past, and another line thrown out into the future, as it were, which connects him with those who came after.

But the point of greatest significance is that James's work reveals to us not only a partial change of method, but a complete change of aim. One can hardly say that present-day psychologists are using new methods to reach the same goal that inspired Locke's *Essay*; the goal itself has shifted. If you ask a contemporary psychologist to settle the question of "the certainty and extent of human knowledge, together with the grounds and degrees of belief, opinion, and assent," he will probably tell you that it is not his business, as a psychologist, to do so. What has become important now is the study of the biological equipment of the knower rather than the certainty and extent of what he can know. Now there is no doubt whatever that the equipment of the knower has a bearing on the certainty and extent of what he can know. What we find out about one of these things *may* shed light on the other. Two facts, however, should be noted. In the first place, contemporary psychologists generally are not approaching their study of the human being with that end in view—of discovering the certainty and extent of what he can know. In the second place, what the post-Jamesian psychologists have in fact so far discovered has not answered Locke's questions.

We are not here saying that Locke's questions are more important than any other questions, and that contemporary psychology is to be condemned because it has not answered them. We have simply been concerned for the present to clarify what has happened in the course of a strange history.

JOHN SOMERVILLE.

NEW YORK CITY.

⁹ By Professor Woodbridge.

¹⁰ Why is it that this chapter is almost invariably referred to as "The Stream of Consciousness"? The present writer is greatly indebted to Professor Woodbridge, who has recently been pointing out, among other things in this field, this significant substitution of terms.

BOOK REVIEWS

Essai sur la formation de la pensée grèque: introduction historique à une étude de la philosophie platonicienne. PIERRE-MAXIME SCHÜHL. Paris: Félix Alcan. 1934. viii + 466 pp. 50 fr.

This survey of Greek thought is designed to furnish the intellectual background of Plato. While serving admirably that professed purpose, it also accomplishes another useful function. It brings together, in a meticulous and thorough fashion, the most recent results of scholarship on all phases of Greek intellectual, religious, scientific, and technical development prior to 400 B.C. It stands in the French tradition which shows the major influence of M. Robin. But it refers frequently to the standard English, German, and other European authorities, though ignoring American contributions. The documentation and bibliographical material by which all statements are supported make it a more useful reference book in its field than most such works.

The book is composed of five chapters which deal in turn with primitive religions and social ideas and practices, with religious developments through Homer, with the contrast between the positivistic thought of the Milesians and the mystic movement of the mysteries and Pythagoreanism, with the major philosophical systems of Heraclitus and Parmenides and Empedocles, and with the age of Pericles at Athens. The historical survey is warped by no dominating thesis, though a bit too much seems to be made of the contention that the greatest synoptic achievement arises from the ferment produced by efforts to combine scientific rationalism and mystic enthusiasm. The wealth of suggestions for possible interpretations of the fragments of the pre-Socratics is accompanied by a healthy caution concerning the possibility of certainty on most points.

S. P. L.

La genèse de la sensation dans ses rapports avec la théorie de la connaissance chez Protagoras, Platon et Aristote. PIERRE SALZI. Paris: Félix Alcan. 1934. 56 pp.

M. Salzi, whose larger book on the genesis and place of sensation in knowledge will be noticed later, has studied in this brief essay the same problem as it occurs in the philosophies of three of the leading Greek thinkers. His source for the doctrine of Protagoras is the *Theaetetus*; for that of Plato, largely the *Republic* and *Timaeus*; for that of Aristotle, the *De sensu*, the *De anima*, and an occasional passage from the *Metaphysics* and the *Physics*. The result is a kind of Hegelian evolution; thesis: the Protagorean doctrine of the sensory flux; antithesis: the Platonic correction of this flux in mathematical stability; synthesis: the control of the two by the Aristotelian doc-

trine of the four causes. The equating of knowledge with knowledge of the four causes implies that knowledge can not be the apprehension of sensory qualities nor yet the contemplation of mathematical entities. That would seem obvious and is certainly Aristotelian. The only question that arises in a reader's mind is whether Protagoras or Plato would have denied it. But that question does not seem to have occurred to M. Salzi.

G. B.

Des révolutions des orbes célestes. NICOLAS COPERNIC. Traduction, avec introduction et notes par A. Koyré. Paris: Félix Alcan. 1934. viii + 154 pp. 18 francs.

To the series of French translations, edited by Abel Rey, of scientific and philosophical works, chiefly Renaissance, which has included selected works by Cesalpinus, Petrarch, Nicholas of Cusa, Bruno, and Fontenelle, as well as Dante's *De Monarchia*, and Machiavelli's *The Prince*, is now added this Latin text and French translation of Copernicus, to the end of the eleventh Chapter of the first Book. The introduction and notes by A. Koyré are especially valuable in bringing out how remote from modern science were the modes of thought of this first great modern scientist. If he desired to "save the appearances," it was not merely a desire to do justice to all the appearances, but to save their rationality, and that meant for him showing that they were appearances of simple and uniform circular motions. This could not be done, he was convinced, by centering them on the earth or even at the sun, and the best he could do still left too many epicycles. The vault of the fixed stars could, however, be made stationary, as benefitted the container of the world, and the sun placed at its center, not for gravitational reasons, but because it was fitting that the source of light should be central. Copernicus even seems to believe in the crystal spheres, and even to assume an axiom, which threatens to prove too much, that "what is round must go round." The earth must be given a "third motion," to keep its axis from being carried around by the enclosing crystal sphere. The reprint and notes are worth the attention of all students of the history of thought, and are unmathematical, and the translation clear.

H. T. C.

Primitivism and the Idea of Progress in English Popular Literature of the Eighteenth Century. LOIS WHITNEY. Baltimore: The Johns Hopkins Press. 1934. xxi + 343 pp. \$2.75.

This monograph adds to the series entitled "Contributions to the History of Primitivism" a study of the struggle between the two

originally antagonistic ideologies of primitivism and progressivism, and of their later "gradual degeneration and confusion," as reflected in some of the novels current in England from about 1750 to 1815. Fully one-half of the book is devoted to a philosophical analysis of what Professor Lovejoy in his introduction calls the "unit-ideas" themselves. It is not, he argues, "the systems of philosophers, as systems, that are the dynamic factors in the general movement of thought," but rather the separate conceptions of which they are composed, such as the notion that man's earliest condition was his best (chronological primitivism), or the counter-idea of progress. He has deserved praise for the skill with which Professor Whitney has followed the interwoven threads of these ideas through the intricate patterns of eighteenth-century philosophy and literature. Her study in fact encompasses a whole "family of ideas": simplicity, benevolence, sensibility, Reason, Nature, enlightenment, and perfectibility, as they clashed and blended at the hands of thinkers as diverse as the Platonists and Hume, Godwin and Edmund Burke. Even the "best minds" of the century appear to the author to be riddled with intellectual inconsistency, at least concerning primitivism and progress. Between the professional thinkers, the pamphleteering middlemen, and the popular novelists, she finds differences only in degrees of confusion. Every philosophical system and fragment thereof, even Hume's, finally got a popular hearing. Too often the latest fashion in philosophical radicalism was sold to the novel-devouring public along with earlier ideas which it might flatly contradict. No one seemed to want to stop believing anything. The result was confusion multiplied by confusion, as the author with remarkable clearness shows. Her work is not only a valuable contribution to the history of ideas, but should also win the attention and admiration of all those who are interested in the processes by which academic philosophy filters into fiction. Few books uniting literature and philosophy display a greater competence in philosophical analysis than this one does. There is no separate bibliography, but the index and footnotes partly fill the gap.

H. A. L.

Deism in Eighteenth Century America. HERBERT M. MORAIS. New York: Columbia University Press. 1934. 203 pp. \$3.50.

Dr. Morais's volume is a welcome addition to recent works dealing with our intellectual heritage. It traces the nature of European deistic thought from Lord Herbert of Cherbury to Robespierre and shows how rationalism gradually permeated the upper strata of American society during the first half of the eighteenth century. Association with British soldiers during the last intercolonial war

and later with the French in the Revolution, as well as other factors, brought latitudinarianism to the common man. Deism and anti-clericalism attained their climax during the French Revolution, only to recede into oblivion in the Second Awakening early in the new century. The story is no longer new to students of the period, but Dr. Morais's study adds many an interesting and worthwhile detail garnered for the most part from primary sources, particularly from magazines. This factual material is put together rather loosely in places and there is some repetition, due probably to the fact that there is no discernible thesis.

Those who wish further information than could be included within its 178 pages have ample guidance in numerous footnotes to other monographs dealing with various aspects of the subject. The division of the bibliography into sections corresponding to the chapters seems not particularly helpful, especially in the case of secondary works, for not a few of them, though mentioned only once, are equally relevant to other chapters. The story of deism in Kentucky and in the South needs still to be told and one wishes that it may soon become the subject of an equally interesting dissertation.

G. ADOLF KOCH.

LONG ISLAND UNIVERSITY.

Howison, Philosopher and Teacher. A Selection from his Writings with a Biographical Sketch. JOHN WRIGHT BUCKHAM and GEORGE MALCOLM STRATTON. Berkeley: University of California Press. 1934. xiii + 418 pp. \$2.50.

In celebration of the hundredth anniversary of George Holmes Howison's birth and the fiftieth of his appointment to the University of California comes this attractive volume. Dr. Stratton has prepared a biographical sketch of his older colleague and Dr. Buckham has compiled a bibliography of Howison's published writings together with some of the references to him by other philosophers. The biography makes extensive use of autobiographical fragments and correspondence. One wishes even more of the correspondence had been included, for it is replete with significant references not only to Howison, but to Royce, James, Palmer, James Ward, Davidson, and many others of his distinguished friends, and it serves to restore in a charming way the intellectual milieu in which these men lived.

The selections from his writings are, so far as one unfamiliar with his unpublished writings can judge, admirable and representative. In addition to the two prefaces and five of the essays in Howison's chief work, *The Limits of Evolution and Other Essays Illustrating the Metaphysical Theory of Personal Idealism* (1901 and 1904), the editors have included part of his address at the St.

Louis Exposition (1904) under the title "The Many and the One"; two addresses on education and moral theory, "Liberal Education and Freedom" (1878) and "The Duty of the University to the State" (1885); and an exposition of the Platonic philosophy embodied in the *Apology*. This last is taken by the editors to represent one of the chief sources of Howison's idealism. However, a critical essay exhibiting the sources and growth of his philosophy is still wanting.

Though the chief value of this volume is now historical, it serves to remind the present generation that Howison made one of the ablest and aggressive defenses of pluralistic idealism to be found anywhere and gave it an application in person and in practise which must continue to win the admiration of free spirits of any faith.

H. W. S.

Collected Papers of Charles Sanders Peirce. Edited by CHARLES HARTSHORNE and PAUL WEISS. Volume V, Pragmatism and Pragmaticism. Cambridge: Harvard University Press. 1934. Pp. xii + 455. \$5.00.

Of the volumes of the *Collected Papers* which have appeared thus far, the present one is undoubtedly the richest in historical importance, in diversity of material, and in veins of thought which still remain to be mined. It contains the long awaited Pragmatism Lectures, and presents in available form Peirce's weightiest papers on general philosophy—those published in the *Journal of Speculative Philosophy*. I know of no better way to reach the heart of Peirce's doctrines than to read the important essays published in Book II of the present volume. The papers in Book III discuss Peirce's relations to the philosophy of common sense, and contain many of his own views under the label of critical common-sensism.

The Pragmatism Lectures repeat with simplifications and some elaborations doctrines already familiar from the first two volumes of the present edition: the phenomenology of the universal categories, the theory of signs, and the analysis of reasoning into its three main types. Peirce's strong idealistic leanings become very apparent here as elsewhere; and his views on reflective thought as an instrument for establishing general modes of behavior (thus subordinating logic to ethics), are brought out clearly. But on the whole the Lectures are disappointing: they are repetitious, they lack integration, and they contain many irrelevant though often interesting by-paths.

With the possible exception of the technical papers on strict logic, Peirce's writings on the theory of meaning seem to me to contain his most substantial contribution to philosophy. According to

him, pragmatism maintains that nothing is in the understanding unless it is first in the senses, that nevertheless perceptual judgments always contain an element of generality or hypothesis, and that therefore such judgments are simply limiting cases of abductive reasoning and so always subject to correction. Ideas are to be clarified in terms of overt, public behavior of things, not in terms of private data of sense or self-luminous abstracta. In this insistence upon the intimate connection between sense and reason as well as upon the denotative reference of all intellectual conceptions, lie the strength and the difficulty of the pragmatic account of meaning. It eschews claims to infallible cognitive powers and yet avoids a stultifying scepticism. It must be admitted that the ambiguities which appear in Peirce's hitherto published writings on the theory of meaning are not ironed out in the papers now published for the first time. And yet if Peirce had been taken as the standard expositor of pragmatism, the often dreary and fruitless polemics on the nature of truth during the first two decades of the present century would have been avoided, with undoubted profit to the clarification of ideas in various departments of thought. For by pragmatism Peirce understood a method of making ideas clear, a branch of logic and scientific method, not a cosmology or a metaphysic. That is why, in spite of his penchant for a form of speculative idealism, he will remain a stimulus and a guide to all students of philosophy whose passion is to understand rather than to legislate.

Kant's influence upon contemporary positivism is a byword. It is interesting nevertheless to read Peirce's account of the indebtedness of his "proto-positivism" to the eighteenth-century thinker, and students of the history of ideas will find much in the present volume to repay their reading of it.

E. N.

The Philosophy of John Dewey. A Critical Analysis. W. T. FELDMAN. Baltimore: The Johns Hopkins Press. 1934. vii + 127 pp. \$1.75.

The complexity of Dewey's philosophy and the heterogeneity of the various factors that have entered into its formulation have frequently been remarked. In this critical study, which originated as a doctoral dissertation, Dr. Feldman has attempted a discrimination and classification of the various strains in this philosophy. It is his contention that "there is not one Deweyan standpoint, but several" and that a determination of their motivation and mutual consistency and an indication of the specific standpoint involved in special phases of Dewey's thought constitute essential prolegomena to an adequate understanding of its meaning. His analysis is

acute, painstaking, and carefully documented. Within its limits it is a reliable and systematic contribution to its subject. The limits in question are those of the philosophic standpoint from which the study is undertaken—that of Lovejoy's "temporalism" and "critical realism." These are manifest in a preoccupation with those phases of Dewey's thought which have chiefly engaged Lovejoy's controversial attention—the status of the past as an object of knowledge, the representative function of "ideas" and the like—to the neglect of that social reference of knowledge which is surely central in Dewey's theory, and in a tendency to dismiss as "astonishing" and "bizarre" those implications of the theory which find no place in a dualistic realism. The result is a useful statement of the difficulties that arise when Dewey's theory is restated in terms of Lovejoy's. But it is perhaps not surprising that such a translation misses something of the essential meaning of the original.

A. E. M.

A Common Faith. JOHN DEWEY. New Haven: Yale University Press. London: Humphrey Milford. Oxford University Press. 1934. 87 pp. \$1.50.

This little book is the latest addition to the Terry Lectures at Yale, and it thus carries the double distinction of its author's reputation and the high quality of the series to which it belongs. It consists of three chapters, entitled respectively "Religion Versus the Religious," "Faith and its Object," and "The Human Abode of the Religious Function." The central argument, as those who are acquainted with Professor Dewey's philosophy might expect, is designed to show that religion should be detached from its supernatural associations within organized historical institutions, and widened, on the basis of its function in experience, so as to cover all devotion to ideal ends inclusive enough to integrate a whole self and arouse emotional support.

The first chapter starts with a confusing excursus into terminology, which suggests that the noun "religion" can not be defined psychologically while the adjective "religious" can; but the main thought is clear, namely, the distinction between any set of values supernaturally authorized, closed, and yet actually competing with other similar sets, on the one hand, and on the other, all devotion to inclusive ideal possibilities. This distinction, in Professor Dewey's interpretation of the present cultural situation, is embodied in an actual opposition, so that "the claim on the part of religions to possess a monopoly of ideals and of the supernatural means by which alone, it is alleged, they can be furthered, stands in the way of the realization of distinctively religious values inherent in natural experience" (pp. 27, 28).

The second chapter attacks the claim of organized religions to a unique validation of truth and sets up the principle: "There is but one sure road of access to truth—the road of patient, coöperative inquiry operating by means of observation, experiment, record and controlled reflection" (p. 32). Professor Dewey apparently follows Aristotle and Kant in separating the practical and the intellectual functions of mind, the former being concerned with ideals, the latter with facts (pp. 20, 21); yet he holds that "the reality of ideal ends and values in their authority over us is an undoubted fact" (p. 44), and "the ideal itself has its roots in natural-conditions" (p. 48) and is "made out of the hard stuff of the world of physical and social experience" (p. 49). It is unfair to expect rounded elucidation in a work of limited scope, and the sympathetic reader might legitimately conclude that, in the author's thought, ideals are "made" or "generated" by the imagination out of matter of fact, then "exist" or are "real" in character and action, and finally are tested by experiment and reflection; but still one would like more light on the concept of truth. In what sense can truth be used of ideals if they are distinguished from facts and if the practical and the intellectual functions of mind are different?

In the third chapter, Professor Dewey reveals himself in the new rôle of religious leader, and preaches a highly successful sermon along the lines of religion, as he has conceived it, on the text: "Ours is the responsibility of conserving, transmitting, rectifying and expanding the heritage of values we have received that those who come after us may receive it more solid and secure, more widely accessible and more generously shared than we have received it. Here are all the elements for a religious faith that shall not be confined to sect, class or race. Such a faith has always been implicitly the common faith of mankind. It remains to make it explicit and militant" (p. 87).

R. S.

Pragmatism and the Crisis of Democracy. CHARLES W. MORRIS.
(Public Policy Pamphlet, No. 12.) Chicago: The University of
Chicago Press. 1934. Pp. iii + 25. 25c.

"What has American philosophy to offer to a thinking nation in a time of crisis?" asks Professor Gideonse, the editor of this pamphlet series, in his brief introduction to this particular booklet. In pragmatism, "the marriage of the scientific habit of mind with the moral ideal of democracy," replies Professor Morris, America finds at her disposal a philosophy which may "provide a living alternative to the thin aristocracy of the head, the blind cry of the blood, and the fury of enraged brawn." For the West is still young, and possesses

"the priceless instrument of a democratically moralized scientific technique and habit of mind"; so that "if the factors as yet uncontrolled do not first win the day, and if the statesmen of the world can rise to the moral courage and intellectual vision which the situation demands, it may yet be said that the period in which we live saw the beginning of the coming to age of the West." The promise of the New Deal, "its general orientation . . . is consonant with the democratic and experimental temper of pragmatic social philosophy." Whether American democracy is "only a disguised form of middle-class ideology or whether it contains as its essence the moral ideal of a classless functional society is the basic issue which the next decades will decide." It is Professor Morris's belief that "alternatives yet lie open." Those who do not share his optimism concerning the driving-power behind such liberalism as compared with the blind forces which impel the various absolutisms and barbarisms bent on choking it, may still be grateful for a succinct, vigorous, and documented statement of a general position whose very flexibility makes definition difficult. Pragmatism offers men hopes of developing "rich, harmonious, expanding systems of interests" built upon the sort of "relative stabilities" which scientific thinking provides. But can it compete, in the short run at least, even in America, with promises at once more definite and more positive in an atmosphere of crisis, uncertainty, and fatigue?

H. A. L.

Essais d'Esthétique de Philosophie et de Littérature. VICTOR BASCH.
Paris: Félix Alcan. 1934. viii + 411 pp.

The themes of these essays range from "Le Maître-Problème de l'Esthétique," a nicely articulated piece of formal analysis, to an ingenious and perceptive literary analysis of Georges Sand and Ibsen, coupled in virtue of their intransigent preoccupation with the Ego or the "moi," the one romantically asserting the self, the other in "sterile isolation" from society. The titles indicate the variety of themes: "Du Pouvoir Expressif de la Musique," "De la Philosophie Politique de Hegel," "De la Philosophie Individualiste d'Ernest Renan." There are several essays on German thought, but they seem, though competent and freshly enough written, neither really fresh nor important.

M. Basch is at his best in French and in esthetic matters. His essay on the expressive power of music is a shrewd and sensitive piece of analysis by one who obviously loves—and knows—music. His closing paragraph states better than most lengthier statements, including M. Basch's own, the nice problem of the way in which music is (and is not) expressive.

“En résumé donc, la musique ne peut exprimer véritablement et directement qu'elle-même. Mais étant capable de rendre le dynamisme de tous les sentiments, de toutes les passions, et même de toutes les créations intellectuelles, elle devient apte à traduire toute la gamme des sentiments indirectement et analogiquement avec ce que toute traduction implique de 'trahison' et toute analogie de chances d'erreurs" (p. 82).

The most characteristic and indicative essay is the one on the master-problem of esthetics, which is not, however, explicitly defined. M. Basch defines the road to its solution along the line of "contemplation" as the central esthetic fact, in both artist and spectator. "Contemplation" seems to be something like the intuition of an essence, the intuition involving intellectual judgment accompanied by emotion. In the "esthetic state" one escapes "from the dreary and desolate prison of concepts and from the categorical imperative (of morality) as well" (p. 65).

I. E.

Die Aufgabe der Wissenschaftslogik. RUDOLF CARNAP. (Einheitswissenschaft, Heft 3.) Wien: Gerold & Co. 1934. Pp. 30. 1.50 M.

This brochure contains in outline the most recent version of the program of the *Wiener Kreis*. Philosophy is identified with the logic of science, which consists in the analysis of the logical syntax of language. Professor Carnap distinguishes between genuine object-propositions, pseudo-object-propositions, and syntactical propositions. He argues that propositions of the second kind should be replaced, at least for the purposes of analysis, by propositions stated in the formal or syntactical language, if pseudo-problems are to be avoided. The fundamental thesis of logical positivism is that all the sciences form a unity, since propositions in any science can always be translated into the universal language of physics. Applications of this type of analysis are made to problems in the foundations of mathematics, biology, and psychology.

The present program and achievements of logical positivism are considerably more subtle than the more familiar earlier formulations, and there is no doubt that it is a movement which is still developing. Above all, it would be a serious error to regard Wittgenstein's *Tractatus* as a final or adequate statement of the continental form of positivism, and many of the objections usually made against the doctrines of that book are altogether inappropriate against the latter. It is to my mind the sanest and most promising philosophical movement in Europe. But it remains to be seen whether in the detailed working out of its theses it will avoid the narrowness in outlook and the uncritical reductive tendencies which characterize some of its adherents.

E. N.

OTHER NEW BOOKS AND JOURNALS

INTERNATIONAL JOURNAL OF ETHICS. Vol. XLV, No. 1. A Defense of Hedonism: *William Savery*. The Ethics of Breach of Contract: *F. C. Sharp*. The Ethics of Croce: *V. B. Evans*. Some Reflections on the Modern Temper: *Norman Wilde*. Social Planning and Individual Ideals: *L. K. Frank*. Ethics and the New Theology: *Charles Hartshorne*.

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Wing, Quan: *A B C Ethics from Life's Storybook*. Illustrated. Boston: Christopher Publishing House. 1934. 63 pp. \$1.25.

NOTES AND NEWS

The JOURNAL is informed that the positivists are preparing for an international congress to be held next year at Paris. The organization committee of the congress consists of Professors Carnap, Frank, Neurath, Reichenbach, and Rougier, while a preliminary committee also contains Professors Joergensen, Lukasiewicz, Morris, and Schlick. The tentative themes proposed for the Paris meeting are: The unity of science (the unitary language of science, the problem of vitalism and the Geisteswissenschaftler); scientific method; physicalism; induction; probability; many-valued logics; scientific sociology; the history of science; logistics. Professor Rougier is to make the opening address. It is also planned to publish an encyclopedia from the point of view of the tendencies which the Congress will represent.

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THE JOURNAL OF PHILOSOPHY

THE EIGHTH INTERNATIONAL CONGRESS OF PHILOSOPHY¹

THE ancient and beautiful city of Prague is one of the few spots in Central Europe where liberal principles are still espoused and where opposing views as to the function of government and the proper end of man can be freely aired, though not without some ominous reflections of the flames of social wars elsewhere. And since the invitation to attend the Congress stressed the ancient ideal of philosophy as a director of man's efforts toward the good life, it was natural that the social problems of the Continent and the intellectual and spiritual issues which they raised should be, explicitly and implicitly, the chief topic of discussion. More than any previous Congress the one just concluded was characterized by an atmosphere vibrating with the notes of national and social conflict. What was surprising to me was that even in the sections devoted to "pure" philosophy, the same tension was to be found. Not explicitly, of course, but in the social implications which allegiance to strict logic was made to develop, and in the sad sight of leading students of scientific method being refugees from political hysteria. Once before, in 1869 after the Austro-Prussian war, a philosophical congress was held at Prague, called to protest against the shame and madness of another war. May the present Congress not have an aftermath as fatal as did the convocation half a century ago.

The Congress was formally opened in the impressive Hall of Parliament by Minister of Education Krčmář. He welcomed the delegates in the name of the President of the Czechoslovakian Republic, the patron of the Congress, who because of illness was unable to attend. Dr. Beneš, Minister for Foreign Affairs, then greeted the delegates, and expressed the hope that the Congress would have an abiding message for a strife-torn world. He underscored the social bearings of philosophy, and declared himself to be opposed to every form of social mysticism and opportunism which aimed simply at the exercise of power. The crisis of democracy he believed to be really a crisis of men, not of the institution, and gracefully ex-

¹ Prague, September 2-7, 1934. This report is based on my attendance at all the five plenary sessions and as many special sessions, information from friends who attended sections at which I was unable to be present, and the reading of the papers I was unable to hear in person.

pressed his regret that practical tasks prevented him from assuming his rightful seat in the Congress as a professor of philosophy. Additional addresses of welcome by officers of the city and university were succeeded by the delivery of greetings from the various countries represented. The absence of any delegation from Russia was very conspicuous. And after the many smooth words of universal good-will expressed by representatives from countries where tolerance is not a virtue, the appearance of Professor Reichenbach, formerly of Berlin, as a spokesman for Turkey was ironical as well as dramatic. This formal session was brought to a close after Professor Rádl read two letters he had received as organizer of the Congress: one from Samuel Alexander, who offered age, deafness, and the long distance as the reasons for his absence; and one from Edmund Husserl, who sketched the mission of philosophy as the search for apodictic certitude.

I

The first plenary session was devoted to a discussion of the limits of the natural sciences, and the two contrasting views offered by the principal speakers were representative of fundamental differences which divided the delegates throughout the many sessions. Professor Bachelard argued clearly and well that there are no theoretical limits to natural knowledge, that so-called insoluble problems are badly formulated issues, and that science is most active at the points where it is pushing back the momentary boundaries of our knowledge. Professor Driesch, on the other hand, insisted that philosophy, as the study of "primary meanings," lays bare the unalterable axioms for every science. He thus claimed that the sciences can not ultimately dispense with the causal principle, Euclidean space, and some kind of "soul-principle" to explain the difference between the inorganic and the organic.

In the discussion that followed, those who hold that knowledge of the type found in the natural sciences need not be supplemented by something else, seem to me to have had the better of the argument. Reichenbach effectively criticized Driesch's views on geometry and physics, and Carnap easily disposed of the doctrine of entelechies as fatuous.

Indeed, to my mind those whose special domain is logic and scientific method had consistently the best of the argument, and in the special sessions devoted to logical analysis conducted themselves with the minimum of emotional by-play. The bitter consequences of loose speculation were apparent on the face of European events to all who cared to see, and many of those attending the Congress found the only road of intellectual salvation in the painstaking, if

sometimes myopic, dissection of logical problems. The prolonged applause which greeted the closing words of Professor Lukasiewicz's technical paper on modern logic, that he was a foe of all "verschommenen 'wahren' Begriffe," was expressive of the fears and hopes of all those who realized the social bearings of the positions the speaker was attacking.

Adherants of the position of the *Wiener Kreis*, together with similar-minded thinkers from France, Germany, and Poland, dominated the meetings devoted to logic, and both as individuals and as a group they were to me the most interesting and vital philosophers present. There was ample opportunity to judge them, for two days before the Congress they had held a *Verkonferenz* in preparation for an International Congress for the Unity of Science, to be held at Paris in 1935; they were therefore present in full force. Most of the papers read at these meetings were technical, but they were received by large and indefatigable audiences. The perhaps disproportionate amount of space and enthusiasm that this report devotes to the logical papers is thus a consequence both of my own interests and my evaluation of the sessions I attended.

The position of the *Wiener Kreis* was expounded by Professor Carnap and Dr. Neurath. Carnap developed his views in opposition both to psychologism and phenomenology, and maintained that all propositions of science are capable of being expressed in the language of physics. In the brief time at his disposal, the import of this doctrine was not developed, and the delicate problem of the autonomy of the several sciences was not touched upon. The programmatic character which the positivistic theses possess at present was felt by many to be an obstacle to their adequate discussion. But interestingly enough, the Dominican Father Bochenski hailed the movement as a continuation of the Aristotelian tradition and as compatible with neo-Thomist doctrines. On the other hand, Professor Ingarden, speaking as a phenomenologist of long standing, admitted that the existence of a distinctive "Wesensschau" was problematic, but urged that the positivists have been too ready to assume that there is no such thing. Incidentally, he took pains to make clear that the *Existenzphilosophie* which has recently been associated with phenomenology is not a legitimate offspring.

In his discussion of the nature of "wholes" Professor Schlick illustrated the technique of operational definitions. He argued that whether something is to be regarded as a "whole" or as a "sum," is not a question of fact, but of the appropriateness of definition; it is convenience and the selection of properties studied which determines whether the behavior of a "whole" is to be described in terms of its "parts" or not. I do not think Schlick defined clearly

enough the issues he was discussing, and in dismissing Drieschian entelechies he seemed to me to have also thrown out the baby with the bath. He contributed very little to understanding what scientific need the concept of "whole" aims to meet—a need which often is a genuine one as the discussion helped to indicate. In his paper, Professor Morris developed a more inclusive form of pragmatism which would give an important place to the analyses of the positivists, but which would supplement their purely formal studies on the nature of symbols by considering the social and biological contexts in which the latter function. It was refreshing to find an American pragmatist accepting the results of modern logical techniques and offering a program for employing them in the interests of an adequate theory of meaning.

In a long address, Professor Reichenbach sketched the contents of his forthcoming book on the theory of probability, a theory which he has developed independently and in great technical detail, but which in essentials is familiar to all students of Peirce. The application of the theory to solve the problem of induction was also indicated by him, and this too is along familiar lines. But Reichenbach's views apparently took his hearers by surprise, judging by the nature of the discussion that followed; and this may testify either to the inaccessibility of Peirce to European students, or to the provincialism of their reading habits. However that may be, Reichenbach's book will, in my opinion, prove to be of first-rate importance and value to all students of scientific method.

Serious obstacles in the way of logical positivism were discussed by Professor Ingarden in a challenging paper. He urged that the metalogical propositions of the *Wiener Kreis* are either meaningless, if meaning consists in verifiability by physical processes, or contradictory. And he insisted on the need for distinguishing meaning from verifiability. In his reply, Carnap agreed that some of the criticisms advanced were fatal, but declared that the formulation of positivism which Ingarden took as the basis for his analysis no longer was representative. The bearings of logical analyses on the social sciences were expounded in an authoritative manner by Dr. Kaufmann, who combines in a fascinating way remarkable competence in the diverse fields of economics, jurisprudence, and the foundations of mathematics. He showed how pseudo-problems in the social sciences can be eliminated by applying a rigorous logical technique, but cautioned his hearers against using Occam's Razor so as to cut the jugular vein of philosophic inquiry. The warning seems to me to have been a timely one, and the tendency against which it is directed one of the dangerous enemies with which the *Wiener Kreis* has to fight. For the price of a precipitate dismissal of genuine difficulties as meaningless is only too often sterility.

I can mention only in passing several other papers classified as belonging to this group: Professor Schiller's familiar thesis, which he supported by numerous questionable illustrations, that no absolute exactness can be found either in philosophy or science, and which called forth from the gentle and courteous Carnap the remark that it was about time philosophers stopped repeating errors which had disappeared from the textbooks a hundred years ago; Professor Meyer's attempt to supplant mechanism by holism by viewing physical laws as limiting cases of biological laws, an attempt which had some points of interest, though it was unclear in import; Father Walker's timely raising of the question as to the ontological facts behind physical theories; Mr. Hemens' absurd claim that modern science is in consonance with Hegelian philosophy, and that its fundamental truths have been anticipated by the latter; and Professor Flewelling's version of absolutes and invariants as fictions of the understanding which are only pragmatically true, and his curious suggestion that in personalism was to be found the solution of the ancient problem of the universal and particular.

II

The rôle of the descriptive and normative points of view in the social sciences was the theme proposed for the second plenary session. If not much light was thrown on the subject, there can be no doubt that considerable heat was generated. Professor Hellpach of Heidelberg, a former Social Democrat and minister of education, pontifically laid down the thesis that *das Volk* is the central subject-matter of sociology, and that common descent and common purposes are constitutive marks of a *Volk*. From this norm for the social sciences he drew the interesting conclusion that every genuine culture is intolerant toward all others. The murmurs of protest from the audience at these words almost drowned out the speaker's voice. And after this performance, it was more than a relief to hear Professor Smith's eloquent condemnation of the intolerance and brutality which characterize the fascist states. He made a stirring call for harnessing the free imagination of man to the services of the norms of science and human welfare. He extolled the American social and philosophical scene for the large rôle which tolerance and informed imagination play in it, and generously interpreted the well-known fact-grubbing tendencies of so many American social scientists as an implicit commitment to scientific standards in their researches.

Professor Smith recognized that his paper was something less than a contribution to the explicit theme of the session, but declared that he was compelled to alter his original essay because of unusual

circumstances.² The procession of German exiles who rose to express their dissent from Hellpach's doctrines and their adherence to ideals of humanity now a heresy in Germany, was a poignant drama. Professor Warbeke's perhaps innocent remark that philosophy can not as such be democratic or marxist, and that even Plato had condemned democracy, was greeted with ear-deafening applause from the German delegates. But to me, at any rate, Professor Hellpach represented just that type of obscurantism which Dr. Beneš had condemned much earlier; and as the discussion showed, neither he nor his supporters were able to give any intelligible account of the concepts they bandied about so freely.

No less obscure were some of the other papers read at the special section devoted to the problem of norms. Professor Emge found that the central inquiry for every philosophy ought to be "what-is-one's proper-concern." But to understand the nature of man in his determinate situation in nature, one must possess a non-discursive grasp on the "whole" in which man is embedded. Professor Wenzl argued that the absence of spirituality in present-day society is due to the disappearance of absolute values. Professor Draghicesco found that the scientific methods of the natural sciences are inapplicable to the social ones, because the subject-matter of the latter is dominated by ends and purposes rather than by antecedent causes. Perhaps the least unsatisfactory paper was Dr. Šules' distinction between law and morals, wherein he attempted to mediate between the claims of extreme positivists and idealists. But my chief impression was that of very muddled waters indeed, which these discussions succeeded in muddling still further.

In the related section devoted to the theory of values, Professor Hartmann consumed two out of the three hours allotted to all the papers in expounding his familiar doctrine of absolute, eternal values. It was, as is usual with him, an impressive-sounding address, though I think none of the basic premisses upon which his entire argument rests were adequately considered, so that those who hold to a naturalistic, functional theory of values were surely left unconvinced. Professor Laird also defended a predicative theory of the good, according to which goodness is a predicate applying directly to objects and is not essentially related to appetites or consciousness. "I have to show that the affective theory is insufficient," he declared. "And I submit it is plainly so." But although he expanded this statement, it is, I submit, not much of an argument. Professor Krusé in his paper urged that a melioristic ethics has close affinities with ethical realism, on the ground that the former

² These circumstances were created by what appears to be the forced withdrawal of Professor Kelsen's paper.

implies a potential coöperativeness on the part of reality with human effort. I am not convinced, however, that such an argument could not easily be made to prove almost any thesis.

III

The relation between religion and philosophy was the theme of the third plenary and several special sessions. Professor Przywara expounded the Augustinian tradition of his Church with intense eloquence and noble zeal. He argued that with respect to subject-matter, method, and point of departure, a mystic religion is presupposed by every philosophy. The key to his address was St. Augustine's statement that if one *knows* the object of one's belief, it can not be God one knows. Every discursive philosophy has its roots in earthly things, and is inferior to, but dependent upon, a transcendental religion. By contrast, Professor Brunschvicg's learned paper was a highly sophisticated delineation of a unitary religion on a philosophical basis, whose corner stone is the knowledge and love of truth.

Impressive though Przywara was as a man, the discussion indicated that he carried little conviction to most of his hearers. He was criticized for converting the problem of the relation between religion and philosophy into the very different one of the relation between *his* religion and philosophy; and the suggestion was made that the question could be best treated by considering the relation between experience and knowledge. Dr. Neurath, as the chief propagandist for the *Wiener Kreis*, scandalized a part of his audience by agreeing boldly with Przywara that traditional philosophy was a secularized theology, and by offering the to him incompatible alternatives of theology and traditional philosophy on the one hand, and the natural sciences on the other. Judging from the protests he called forth, Neurath touched a tender spot on many a philosopher's skin: his bomb-shell utterance was roundly denounced, and the "scientific" character of traditional philosophy was vehemently defended.

In the special sessions, Professor Chevallier declared that the modern ills of man are due to his loss of faith in absolute values, to his following Protagoras rather than Plato. He recommended taking man's finite nature, not as a measure of all things, but as a clue to a transcendental reality. Professor Lossky undertook to show that the Christian world-view offers an admirable synthesis of opposite poles of thought in metaphysics, value theory, and the philosophy of social life. Professor Shebbeare found that popular religion as a constructive faith has a more vital appeal than Hegel's philosophy of religion, which finds God only retrospectively in achieved his-

tory. And Professor S. Frank discovered in the present collapse of religious belief a crisis of rationalism; he believed it was an opportune occasion for the rebirth of a negative theology in the form of a mystic knowledge of the inexpressible unity of being.

With some negligible exceptions, the outcome of the studies in the sociology of religion was worlds removed from the minds of those who participated in these sessions. Faith, belief, spirituality, are things which were conceived as growing in a social and economic vacuum; there was little recognition that religion too has a material basis or that the ills of mankind are the products of things other than spiritual conflicts. Is it too much to expect that philosophers should not discourse upon religion as if they were preachers, and that they should discuss the conditions of its growth, its characteristics and crises, in much the same spirit as a naturalist studies a plant? To me, at any rate, the evangelical tone of most of the papers was an intellectually depressing experience.

IV

The fourth plenary session was given over to the discussion of the crisis of democracy, and was supplemented by four additional afternoon sessions. This plenary session was the longest and the noisiest of all. Professor Bodrero naturally defended the fascist state. He analyzed the Enlightenment and the French Revolution, to show that the individualistic capitalism and the lust for private gain to which they gave birth are the sources of our contemporary evils. On the other hand, in the Italian fascist state he found the single alternative to the crass materialism of our civilization. But he admitted, very disarmingly, that the ideal of a corporate state will require many generations before it can be adequately embodied.

Defenders of democracy were not lacking, especially French ones. Thus Professor Basch and M. Barthélemy shouted their belief in a progressive humanity with roof-raising voices and to the accompaniment of passionate stamping of feet. They held it was possible for an individual to develop so as to live in harmony with, and not in fear of, the state; and the brutal egoism of the middle ages was prophesized as the consequence of a fascist organization of society. The abstention of the German delegates from this debate was very conspicuous; their behavior proved once more that discretion is the better part of valor.

In a more dispassionate mood, Professor Montague made a careful analysis of the weaknesses of contemporary democracy. He offered a plan to qualify present-day practises with desirable features taken from fascist and communist programs. His suggestion was to create within capitalistic society "island communities" run on

fascist-communist principles. Because of his choice of language, there was some risk that many in the audience would mistake Montague for an exponent of fascism, and Professor Smith attempted to make clear the fundamentally democratic nature of his countryman's views. While Professor Montague believed in the practicality of his plan, the time was much too brief for him to prove his point, and the general feeling was that the utopia he proposed was inadequate to meet modern problems.

The afternoon sessions devoted to the same theme contained a miscellany of papers. Professor Feldkeller of Berlin distinguished himself by offering a heroic philosophy of history, in agreement with the politics of the day at home. Every philosophy has a political tendency, he declared, and so-called pure philosophy is simply middle-class philosophy. (Shades of Stalin!) Professor Kozak saw the crisis of democracy as due to the resurgence of naturalism, which he identified with nineteenth-century amorism, popular Darwinism, and fatalistic Marxism. M. Barthélemy argued that it is starvation which has created the mentality so fatal to democracy, and declared that the alternative to a democratic state is tyranny. Dr. J. Fischer of Prague in a well-reasoned paper argued that the democratic ideal requires the subordination of economics to social control, and thus is not incompatible with socialism. Professor Morrow discussed the state of contemporary liberalism, and found that though concessions must be made to its critics the heart of traditional liberalism is sound, i.e., that the individual is the chief source of value, the state is merely an instrument for securing his needs, and that the practice of reason is the strongest support of the social order. Professor Lavergne offered an interesting solution to the difficulties of present forms of parliamentary government in the form of a double universal suffrage: each individual would vote once as a consumer and once as a producer. But how such a scheme could be implemented within the present framework of industrial organization was not considered by him. And finally Professor Rougier offered the principle that the ruler is responsible to the ruled as the criterion for distinguishing authoritative from democratic states. He acknowledged some of the advantages of dictatorial government, but also pointed out the high price which must be paid for them: constant danger of panics, inflexibility of policy, and the disappearance of scientific objectivity. The authoritative state, he concluded, turns away from the Olympian deities in order to worship at the altar of the dark Chthonic gods.

V

"The mission of philosophy" was the theme for the final plenary session, and in the light of the papers and discussions of the preceding days it was perhaps not to be expected that a clear answer would be given. Professor Orestano, replacing Croce, who for unexplained reasons did not come, characterized the past century as having an abundance of grandiose philosophical theories, and the present one as a period of intense criticism. Italian philosophy, he believed, is critical in a sense far beyond Kant, for according to it the categories are transitory expressions of the spirit and need of the times. However, philosophy is to be neither fascist, Marxist, or liberal, but the pursuit of a single truth. The mission of philosophy is to fortify the soul, and by combining criticism with synthetic hypotheses to reveal new values.

As the second speaker, Professor Utitz affirmed philosophy to be a genuine science, though not a "mere" science—for it has a vital message for "life." But the philosopher can not always embody his philosophy in his own person, for we are all sufferers from the limitations of finitude. Without having to subject its concepts to experimental control, the task of philosophy is, to disclose the laws of the understanding. I must confess I was unable to get any clear idea from Professor Utitz what he believed the task of philosophy to be. I regret to say that in his case, as in so many others, the chief object of his address seemed to be edification, not understanding.

In the afternoon sections devoted to this topic, Professor Lalande suggested that the essential task of contemporary philosophy is to make clear to the masses that the evolutionism of the nineteenth century, in which he too found the seeds of barbarism in present-day politics, has no scientific basis. Professor Conger, fresh from a visit to Asia, believed that in the development of the age-old idea of man as a microcosm, a fruitful field can be found for coöperative effort between the east and the west. And according to Professor Salomaa, the task of contemporary philosophy is to formulate a new critique of reason. On a somewhat different theme, Dr. Zollschan argued that the philosophy one professes is not racially determined, although there are native tendencies in each man which lead him to adopt a definite outlook. In the discussion, Professor Meyer of Hamburg defended the racial theories of the Third Reich, and perhaps only the lateness of the hour and the fatigue of the audience saved the day for law and order. And this report would not be complete without mention of Professor Heyde's surprising discovery that while there was such a thing as a national science, in the sense that each nation occupies itself with characteristic problems, all

national boundaries are wiped out when the issue of the truth of solutions is raised.

Some historical papers were included in this section. Dr. Löwith found in Nietzsche the philosopher most expressive of our times, and then turned a complete somersault by declaring that Nietzsche's writings were both opportune and inopportune. Professor Kraus traced the history of German philosophy in Bohemia from Bolzano through Brentano, and showed in an interesting manner that the tendency has been to base philosophy on psychology and an empirical method. Finally, Professor Fung briefly indicated the content of contemporary philosophy in China as an interpretation of its classical thinkers and institutions in terms of current problems.

VI

The session devoted explicitly to the theory of knowledge contained some papers of interest, and was refreshing if only for the variety of topics discussed and because the favorite horses of traditional epistemology ran only seldom. Professor Habermann made an ambitious and worthwhile attempt to interpret causal connections in chemistry in terms of probability relations, and incidentally developed the topology of chemical behavior. Professor Pollak discussed the ontological status of qualities and truth, and arrived at a watered-down version of objective relativism. Only a hair separates truth from error on these points, but Professor Pollak seemed to me to be often far removed from the side of the angels. Professor Michaltschew wrote what is to me a highly amusing piece, in which he compared Rehmke's philosophy with dialectical materialism. He discovered that they have twenty points in common, but also important differences. The points of difference happen to be fundamental, while the similarities are those which can be found between any two realistic views of the world. Professor Watson examined Whitehead's philosophy of nature as expounded in *Concept of Nature*, and defended it against some imaginary critics. And Professor Petronievics sketched his metaphysics, which is a monadology developed in the grand manner, and often reminiscent of the macroscopic atom so well known to readers of Professor Northrop's writings.

VII

A few papers on psychology, pedagogy, and esthetics remain to be reported. Without analyzing the claims of opposing schools of thought, or trying to mediate between them, the proper subject-matter of psychology was identified by Dr. Brunswik as the study of intensional activities of the mind. Professor Ramul made some

worthwhile points on the dependence of history upon psychology, although he did not state clearly the type of psychological investigation which is relevant to the historian's task. Professor Robin contributed some wise words on the teaching of philosophy and the contents of philosophical curricula, and saw in the translating and expounding of philosophical texts an important way to develop the philosophical spirit. Professor Givanovitch achieved the unbelievable by compressing into three pages a complete system of philosophy, including an elaborate system of education. And in a suggestive essay* Dr. Mukařovský approached the analysis of art objects as semeological facts, as signs which are communicative as well as autonomous or non-transitive, differing in this last respect from the signs employed in the sciences.

VIII

A report of the Congress just closed is hardly possible without at the same time offering an estimate, and thus perhaps revealing more about the reporter than the reported. It is therefore advisable that I summarize my impressions scattered throughout these pages and state baldly my reactions. About the fructifying and inspirational value of the papers and discussions it is surely too early to speak. I believe that some of the essays submitted are significant contributions to philosophy. But as a whole, I do not think the intellectual level of the present Congress reached the standards set by the two preceding ones. Perhaps it is the selection of topics, perhaps the changed social situation throughout the world, which is to blame. But whatever the reason, a majority of the papers were simply occasions for despair to all those who do not view philosophy as a substitute for music and poetry as expressions of the emotions. There was a woeful lack of clarity, of analysis, of appeal to logic and empirical findings. There was an abundance of oratory without a compensating abundance of integrated vision. And without either a sound method or a reasonable objective, what claim has philosophy upon the attention of mankind?

The mechanism of the Congress was almost everything that could be asked for. The organizing committee, and especially Professor Rádl, state, city, and university officers, and even the gods who control the weather, went out of their way to make the week spent in Prague comfortable and interesting. The beautiful and historic city provided an admirable opportunity for all those who cared to, to enjoy the sights, smells, and sounds of a majestic past marvellously preserved in modern settings. There was an interesting publishers' exhibit of recent books on philosophy, although America was represented most inadequately; while antiquarians

could examine books and manuscripts from the libraries of Hus, Komensky, Bolzano, and Brentano. And there were a fortunate few who were conducted by Dr. Škrach through the intricacies of the Masaryk archives and the delights of the President's private library. Occasions were also created for the members of the Congress to meet one another in a more intimate way; at a tea at the Společenský Klub, at a garden party given by Dr. and Mrs. Beneš in the beautiful gardens and corridors of the Černín Palace, and at a reception given by Dr. Alice Masaryk in the Hradčany Castle.

Naturally, there were difficulties, remediable and irremediable. The lack of a universal language was a sad handicap to those whose linguistic upbringing was provincial. American and English delegates were at a special disadvantage, for English was rarely spoken and more seldom understood. For this reason papers read in English found few to discuss them. In the allotment of time to papers and discussions wise counsel did not always prevail. As already mentioned, one paper consumed at least two out of the three hours devoted to three addresses; and in another afternoon session, which began at four and for which six papers were scheduled, the fourth paper was not reached until eight o'clock. In general, the program was too crowded, many papers were too long for ordinary endurance, and the discussions frequently were independent addresses. It was not unusual for delegates to advertise beforehand their own lecture in commenting on someone else's paper. Speakers frequently overstayed their time, and the amusing play of the Oxford Congress, in which the impatient applause of the audience at the speaker's failure to heed the chairman's warning is mistaken for a grant of additional time, was staged with gusto several times.

At the closing session it was decided to hold the Ninth International Congress at Paris in 1937, three hundred years after the publication of Descartes' *Discourse*. Henri Bergson was invited to act as its honorary chairman.

One of the last resolutions to be proposed was introduced by Professor Montague. It reads: "The philosophers gathered from many lands in this Eighth International Congress do solemnly reaffirm the faith of their great predecessors in the liberty of thought and conscience, and the right of all men to express freely the opinions which they believe to be true." It was a gallant gesture made on behalf of all those persecuted in many lands, and was adopted by a large majority without discussion. Some silently voted against it, some did not vote at all, and the Italian delegation voted for it with enthusiasm.

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I

RECENT developments in the theory of mathematics and of logic have resulted in an increased interest in the purely formal aspects of thought. This is a departure from the characteristic and traditional emphasis of modern science, which has concerned itself primarily with empirical investigations. Such a tendency may be explained partly as a result of the remarkably successful development of the empirical sciences and perhaps in some degree as a continuation of an earlier reaction against the narrow and uncontrolled rationalism of the middle ages. The empirical sciences still retain their importance, but coöperating with them now are the formal sciences. Conditions would be ripe again for a conflict between rationalism and empiricism if contemporary scientists had not grown wiser than their predecessors. For the tendency to-day seems to be to admit from each side that the other has its proper place and function. Conflict is avoided simply by accepting the distinction as fundamental and leaving controversy to the philosophers.

It is not my intention in what follows to question either the validity or the value of this distinction. My purpose is to attempt to clarify somewhat the distinction itself and to try to indicate what seems to be its true character. I shall try to show that the difficulties which such a distinction tends to raise result from the fact that once this distinction is accepted it is often assumed to refer to two different kinds of thought processes, one of which is formal and *a priori* and the other material, empirical, and *a posteriori*. In opposition to such a view of the distinction, one which sometimes is held consciously and explicitly but more often is tacitly presupposed, I wish to suggest what appears to be a more adequate and satisfactory conception of its character and significance.

II

When we consider the actual procedure of thought as it concerns itself with specific problems it appears that neither the *a priori* nor the empirical type of thought occurs in complete separation from the other, and also that the presence of the one does not exclude the other. It is essential that this be clearly understood if the true significance of the distinction is to be discovered.

Granting that pure mathematics and formal logic provide us with examples of *a priori* reasoning, it nevertheless is true that both began as attempts to solve practical problems. Before there was anything which can be called a science of mathematics there were practical rules of measuring and calculating. Such rules are not

mathematics, but without them, and hence without the practical needs which give rise to them, it is possible that mathematics might never have been born. The same may be said of the conditions which led to the appearance of logic as a science of inference. Before logic existed as a science there were rules of argument whose aim was persuasion and which belonged more to rhetoric than to logic. Here again the original aim was practical, to meet a need created by the social and political conditions of Greek life. In both cases it required the genius of the Greek mind to discover the general principles upon which the validity of the practical rules of technique depended.

Not only did practical considerations lead to the discovery of the universal principles upon which mathematics and logic were originally established, but the same is true also of the development of these formal sciences and of the applications which they received in attempts to solve specific problems involving empirical factors. To the extent to which there is a selection of postulates in the procedure involved, for example, in the solution of a specific problem in the field of mathematics, we have in that process of selection a factor which is not itself included as a part of the strictly formal reasoning. It is the testimony of mathematicians themselves that not only is a factor of selection involved, but very often the selection itself is a matter of guesswork and of trial and error, continued until the proper formulae have been tried and found to be successful. It is important to remember, however, that the process of selection is not itself a part of the development of an *a priori* system. The system is developed from the postulates selected. The same may be true of the evaluation of the resulting *a priori* system. Here the question of the relevance of the conclusions to some other problem may determine the use which is made of the *a priori* system, but that evaluation is not a part of the system itself.

If we put the question of why *a priori* necessity is possible in pure mathematics and formal logic the answer seems to be that it is the result of their character as postulate systems. If definitions and postulates are once definitely determined, the conclusions follow by logical necessity. Thus the essential condition of *a priori* thought is that the grounds upon which the conclusions rest are determined before the inference itself takes place; this specific inferential process has nothing to do with determining the character of the premises. The nature of the results which we obtain by such a process may lead us to revise the premises or to substitute different ones, but this again is not a part of that particular inference itself. Thus we may say, provisionally at least, that reasoning is *a priori* where the character of the system, or the premises upon which it rests, are determined independently of that reasoning process itself.

Such a view of the character of *a priori* thought need not require us to identify formal inference with calculation. It may be true that the same conditions are present in the case of calculation, but this does not mean that calculation alone is possible under those conditions. Calculation is a mere substitution of identicals, while in inference the terms themselves are not absolutes. It is possible to account for the existence of formal thought which is more than mere calculation if we are warranted in believing that a system may have in some sense a fixed and determinate character, although the terms within the system are not absolutely fixed and determinate beforehand. It is, of course, true that the terms must have some meaning to begin with. This may be an arbitrary meaning given them in definitions, or in more loosely constructed systems it may be simply a generally understood meaning. But some definite meaning is either conferred by definitions or developed in the postulates before *a priori* thought can operate; for it is obvious that there must be more than one term and that the terms must be distinguishable from each other. On the other hand, the meanings of the terms can not be determined completely before the inference takes place, else there would be nothing to infer and the only process possible would be calculation. The terms within the system must be fixed and determinate beforehand just to the extent that the definitions and postulates which determine the character of the system impose certain definite limits upon the meanings of the terms. In one sense this determination is partial, in that it permits other meanings to appear which do not conflict with the limitations originally imposed. In another sense the determination is final, in that the limitation which is imposed by the definitions and postulates can not be transcended without destroying the system itself.

III

In an empirical science the same process is involved, but under different conditions and in a different manner. The difference may perhaps be made clear by distinguishing between two types of premises, the postulates of a formal science and the hypotheses of an empirical science. Hypotheses are distinguished from postulates by the fact that they involve a reference to empirical data. So far as we have gone, then, the difference between postulational and hypothetical systems is not a difference to be found in the process of discovering the consequences of the premises, but it is in the character of the premises and the process by which they are selected. To the extent that thought is formal, the consequences of the premises are drawn independently of any explicit reference to empirical situations. To the extent that a reference to empirical data determines

the selection of premises and is involved in their meaning, thought is material rather than formal. In both cases the process of going from premises to conclusion is essentially the same.

The last statement contains the qualification "essentially," for when we examine the actual process of constructing hypothetical systems there are methodological differences which are important. In developing a scientific theory concerning some empirical problem the construction of the theory is performed in such a way that there is not only an original, but there are also constantly recurring comparisons of the consequences drawn by thought with the empirical situation. In the course of such an investigation the comparisons often result in repeated revision and supplementation of the original premises. What we find in such a case, then, is not merely the development of the consequences of a single fixed set of assumptions, but the discovery of some of those consequences, a comparison of them with the empirical data, and a revision or supplementation of the original hypotheses. Thus the construction of a system of implication is begun, comparison is made with the empirical situation, and a revised system is substituted for the original one.

The distinguishing characteristic of an empirical science is sometimes said to be its verifiable character. No doubt such a statement is both true and important when properly qualified, but it does not tell all the story. It is perhaps just as important a distinguishing characteristic of an empirical science that verification shall be relevant as that verification shall be possible. The point is that in the case of an empirical science the significance of its general principles is found in their reference to empirical situations. The general principles are considered in the light of their reference to empirical situations. This is decidedly not the case with a formal science. In a formal science the general principles are not considered for the sake of an empirical situation, but for the sake of themselves, their consequences, and their relations to other propositions within the system.

It is important also, in the case of a theory within the field of an empirical science, that verification shall be possible as well as relevant. Only confusion can result, however, if we interpret this to mean verification in any final and absolute sense. The fact that such scientific theories do refer to an objective order involves the consequence that we can never be sure that the relevant facts are all in or that all the facts which are in are relevant. The consistency and internal harmony of the theory are important, of course, but from the standpoint of an empirical science they are important only as a means to an end. It is true a scientific theory may be studied with a view to discovering its logical implications, but such a study is not

a part of the work of that science unless undertaken merely as one phase of the task of verification. Where there is involved an ultimate reference to the objective order, it is simply because that order is objective, to be taken and not made, that there is always the possibility that all its relevant characteristics have not been discovered.

There are numerous examples of scientific theories which have been apparently verified and used successfully as the basis of predictions of actual events, but which have later turned out to be inadequate. The question which can not be answered is the question of who is the judge to determine when all the facts are in. New means of extending the range of human sense perception are constantly developing. The possibility of a resulting modification of scientific theories once regarded as final is too familiar a fact to require special emphasis.

The application of a scientific hypothesis to the objective order assumes always that things are what we take them to be. Even so simple a process as addition, though the conclusion is certain so far as it is considered merely as an arithmetical process, has objective validity in its application to specific situations only if the objects counted have been counted correctly. But it is obvious that we can never be certain of this in an absolute sense. A prediction that the sun will rise to-morrow morning is one which it would be difficult if not impossible for most of us to doubt. But we know with certainty it is true only if the sun is what our hypothesis says it is and only if it belongs to the kind of a system our hypothesis says it belongs to. What certainty we have in the application of ideas to the objective order is thus "moral" or practical, not a theoretical certainty.

What I have called moral or practical certainty is often confused with theoretical certainty. For example, Professor Weiss writes: "It is almost a slogan to-day in philosophy that there are no material certain propositions. But to me it is indubitable that the proposition 'Some day in some place I shall meet myself coming toward me' is an absurd material proposition and its denial material and certain."¹ The value of this quotation for our present purpose is enhanced by the fact that in it a common confusion appears in an uncommonly explicit form. If inability to doubt a statement means that the statement is certainly true, then we could settle our controversies by taking a vote. To say that a proposition is indubitable is to make a statement which concerns primarily our psychological processes. Such a statement as this one quoted above is indubitable

¹ Weiss, Paul: *The Metaphysical and the Logical Individual*, in this JOURNAL, Vol. XXX (1933), p. 288.

to me because I see that it follows necessarily from something else which I do not doubt, namely, such a conception of the nature of the existing order which excludes its denial. But there have been, and perhaps are to-day, many to whom its contrary would be just as indubitable. Reference to widely held primitive conceptions of personality is sufficient to show that the indubitableness of this statement is relative to one's conception of the nature of things. Such a criterion inevitably raises the question of whose doubt, or ability to doubt, we are to accept as final, and thus a further criterion becomes necessary.

The difference between formal and material thought thus appears to be no difference in the thought process itself, but a difference between two different purposes which call the thought processes into being. This may be called a practical difference in the sense that it is a difference of the end for the sake of which thought takes place. Formal thought consists of thought which develops without reference to the bearing of its conclusions upon empirical fact. As a consequence there is no occasion, so long as no internal inconsistency appears, to revise or modify the postulates from which the conclusions are inferred. Thus the general principles are determined prior to the process itself and remain fixed for the process itself. In the case of an empirical investigation the general principles are not finally determined prior to the process of thought because it is their discovery which is the aim of the process taken as a whole. But during any single phase of the investigation the hypotheses or suppositions which are proposed as the solution of the problem have precisely the same status as the postulates of a formal deductive system. The inference proper consists of discovering the consequences of these hypotheses. The supplementary activities, which distinguish this type of thought from formal thought, such as the comparison of conclusions with empirical data, do not themselves belong to the process of discovering the implications of the hypotheses which serve as premises. What I have called the supplementary activities may consist of other inferences for which conclusions already obtained serve as premises. The difference between deduction and induction, therefore, is not in the act of inference itself, but in the conditions under which the inference occurs and in the teleological control or application of the inference.

IV

One important consequence of this view of the difference between formal and material thought is the fact that the same thought process may have either a formal or a material significance and that its status may vary from one to the other. The criticism that this

amounts to no difference at all has a certain justice, but it ignores a difference of emphasis which is of great practical importance. This is the fact that we do distinguish definitely between formal and empirical sciences. We also distinguish between the various empirical sciences as more and less formal. To put the matter differently and perhaps more clearly, let us say that in some empirical sciences such a formal system as mathematics is more relevant and useful than in the case of other types of empirical investigation. The reason for this is that where we are concerned with what seem to be pervasive characteristics of a realm of phenomena, and are able to ignore other characteristics which are not pervasive, an *a priori* system may be applied without constant reference to the data themselves. In more "concrete" investigations, i.e., as our investigations are concerned more with the distinguishing characteristics of phenomena, then *a priori* systems become less applicable without constant comparisons and reconstructions.

When we compare the physical sciences with the social sciences one of the most striking differences is the greater assurance with which the physical sciences can predict the occurrence of events within their own fields. The physical sciences, as comparatively abstract, concern themselves with the pervasive characteristics of the objects which they investigate. The social sciences differ from the physical sciences not because the objects which they investigate lack pervasive characteristics, but because those pervasive characteristics are not, for the social sciences, the important and significant characteristics. This may be owing partly to the fact that the objects and events investigated by the physical sciences are simpler and more uniform, while those investigated by the social sciences are more complex and individual. The simpler our material the more adequate is an abstract treatment of it, for the fewer are the direct connections which it is necessary to establish between thought and empirical data. On the other hand, the more complex our material the more complex are the interconnections between thought and empirical data and hence there is greater possibility of conflict.

In summary we may say that in one sense all thinking is formal and *a priori*. It is a process of discovering the consequences of what, for the process itself, may be called a set of postulates. Whether these "postulates" are true or false, whether they are believed to be true or false, whether they are relevant or irrelevant to any practical need, all of these are questions which have nothing to do with the process of discovering the consequences of the "postulates." But in another sense all thinking is material and empirical, for thinking is always the act of an individual mind with interests and wants, likes and dislikes. Thinking does not take place in a psycho-

logical vacuum. When we turn our attention away from the formal process itself and consider it simply as an episode in the history of a mind it is plain that such processes do not occur without some motivating interest or need. It may be, it is true, that the motive which the process of thought satisfies is merely a desire to know what follows from a given set of propositions, and although the desire to know is not itself a part of the process of drawing the conclusion, yet it is one of the conditions without which the inference would not occur.

If such an analysis is sound in principle then we may carry it a step further and say that formal thought differs from material thought as one phase of a wider and more inclusive process. As thinking, considered as a practical activity of solving specific problems, became more expert, more self-conscious, and more sophisticated, this special phase of the problem solving activity came to be distinguished from other phases and to assume, for certain purposes, an independence of the other phases. In support of this is the historical fact that it was only after considerable progress had been made in the development of logic and mathematics that their character as formal sciences was recognized. The birth of the formal sciences as such was a process of abstraction from any reference to empirical data. This does not mean that such a reference is simply meaningless; it means that for the purposes and aims of the formal sciences such a reference is irrelevant.

The process of abstraction which makes possible the recognition of the formal character of such sciences is itself possible as a consequence of the fact that inference alone is not capable of establishing the existence of any fact in the objective order. We do by inference discover the existence of objective facts, and in such a case the conclusion has material as well as formal truth. But the material truth of the conclusion can not be established merely by the process of drawing the conclusion. We can know before verification that the conclusion has material truth only if we already know that its premises have material truth. And verification itself rests upon assumptions, such as those concerning the reliability of perception, which are not themselves capable of strictly rational proof.

Formal thought is simply one phase of empirical thought, removed from its empirical setting, and considered in independence of any connection it may have with empirical fact. Conversely, empirical thought is formal thought which is undertaken for the sake of discovering the connection between its premises and empirical data. Formal thought appears only when man becomes aware of his own mental activities and distinguishes the process of inference from other psychological processes.

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SAMUEL M. THOMPSON.

BOOK REVIEWS

The Philosophy of Bhedābheda. P. N. SRINIVASACHARI. Madras: Srinivasa Varadachari & Co. 1934. xvi + 366 pp. Rs. 5. 7/6.

This volume should be of interest to students of Western as well as of Eastern philosophy. The author expounds a type of Vedānta that deserves to be better known. The system of *Bhedābheda*, which may be translated "identity-in-difference," is attributed to Bhāskara, a critic of Śaṅkara, and represents a compromise between the extremes of Śaṅkara and Rāmānuja. His criticism of the doctrine of *māyā* or illusion is of special interest. Other schools of *Bhedābheda* philosophy are described and there is an illuminating discussion of its relation to śāktaism. Part II of the volume is devoted to a discussion of analogues in Western philosophy from Neo-Platonism to Bosanquet. Professor Srinivasachari's exposition is exceptionally compact, informative, and critical and may serve as a good introduction to Vedānta in general.

H. W. S.

Jean-Jacques Rousseau, Moralists. CHARLES WILLIAM HENDEL. London and New York: Oxford University Press. 1934. Vol. I, pp. ix + 316. Vol. II, pp. 348. \$7.50.

It takes a certain amount of courage to write a book about Rousseau which depicts him neither as a lachrymose fool nor subverter of all standards. It takes even greater industry than courage to write such a book with material drawn almost exclusively from original sources, many of which are still in manuscript. Mr. Hendel has done both of these things and done them admirably. Although he is discussing Rousseau simply as moralist, he has managed to give his readers a closely delineated picture of his subject's mental growth so that the various published writings fall into place as the culminating points of Rousseau's varied meditations. The danger of developing a man's thoughts exclusively from the written word is over-intellectualization. The emotional and esthetic motives are probably never absent from anyone's thinking. This danger Mr. Hendel has on the whole avoided and though one may question some of his interpretations, one would require more than the average amount of self-confidence to question them without misgivings.

G. B.

Value and Reality in Bradley's Philosophy. TORGNY T. SEGERSTEDT. Lund: A.-B. Gleerupska. 1934. iv + 264 pp.

A discussion of Bradley now comes to us from Sweden. Unfamiliarity with the English language has resulted in a large number

of errors in printing. The same cause may possibly account for the considerable obscurity in the meaning of the text. The central thesis is that Bradley viewed reality, sometimes as a total logical system, sometimes as a total experience, and that he treated value in the same two-fold fashion. But the two points of view are not to be accounted for by a shift of position from the earlier to later writings (as Professor Kagey has argued). They are rather due to Bradley's reluctance in his earlier writings to be driven to expound his metaphysics and his subsequent attention to special and highly technical metaphysical problems.

S. P. L.

An Evaluation of the Philosophy and Pedagogy of Ethical Culture.

SAMUEL FREDERICK BACON. (Ph.D. dissertation.) Washington, D. C.: Catholic University of America. 1933. viii + 182 pp.

This thesis has two conclusions: one is that the Ethical ideal "owes its efficacy to circumstances and to its own inherent desirability, rather than to any philosophical basis" (p. 87); the other is that though the principles of Ethical Culture are sound, they are ineffective because they lack the sanctions and motives of religion. Since the author makes no serious attempt to evaluate the religious aspects of Ethical Culture, it is not clear on what grounds he charges it with irreligion. The context suggests, however, that for him religious education implies indoctrination in theological ethics. One might infer, however, that theological religions as well as Ethical Culture thrive on "circumstances and inherent desirability" rather than on doctrine. Certainly both the author's exposition and the literature he has examined prove that Ethical Culture has not nor claims to have any single philosophical basis. Its philosophical systems are based on morality, not *vice versa*.

Dr. Bacon has made a careful and conscientious study of the educational philosophy of Ethical Culture and it is regrettable that the merits of his investigation are marred by a captious and uncritical evaluation, an evaluation that must impress even those who agree with its premises as immature and unphilosophical. Unfortunately we can not devote space here to the pedagogical observations of the author, which are probably the most informative aspect of the book. Suffice it to remark that the thesis is an excellent example of the fruits of indoctrination.

H. W. S.

Modern Tendencies in Philosophy. Aristotelian Society Supplementary Volume XIII. The Symposia read at the Joint Session of the Aristotelian Society and the Mind Association, University College, Cardiff, July 6-8, 1934. London: Harrison & Sons, Ltd. 1934. Pp. 236. 15 s.

This volume, in addition to an address defending an idealist point of view by Professor J. W. Scott, contains five symposia. That on "Liberty and the Modern State," by Messrs. Joad, Strachey, and Field, is too brief to add much that is new to so big a topic. More interesting is the one on "Artistic Form and the Unconscious," particularly the highly critical contribution by Mr. P. Leon, so good that the reader regrets his omission of seven of his ten meanings of "the unconscious." The symposium entitled, "Is There an Element of Immediacy in Knowledge?" does not get further than to reveal the treacherous character of the term "immediacy."

The two remaining symposia contain real contributions. That on the subject, "Is Analysis a Useful Method of Philosophy?" is notable in the first place for Mr. John Wisdom's clear statement of what the method of logical analysis tries to do: it is something more than explication of words, being an attempt to reach the ultimate facts. Clearly there is a further question here, what constitutes "ultimacy" in facts: simplicity, parsimony in assumptions, immediate givenness? In the second place, the amusing reply by Mr. Cornforth, from a Marxian point of view, accusing Mr. Wisdom and the logical positivists of being just another bunch of self-deceived apologists for the bourgeoisie, raises a question whether the Marxian method is going to get us anywhere in philosophy.

The symposium on "Communication and Verification" is valuable throughout; particularly in Professor L. J. Russell's able defense of the thesis that verification "must be interpreted as some kind of public performance," and hence can not be some private immediate experience, for that is unsharable, even though it is an experience of "structure." His identification of verifications with reports sounds queer. It is like saying the history of the world is Mr. Wells's report of it. And yet Professor Russell is probably on the right track. But when he adds that reports are made by recording thermometers just as well as by observers with minds, one feels the need of further definition of the term "report." And as he further indicates, the term "verifiable" is another one that clearly stands in need of adequate definition. Altogether, the volume raises, in unusually sharp fashion, a number of rather important questions for further debate.

H. T. C.

Freedom in the Modern World. JOHN MACMURRAY. New York: D. Appleton-Century Company. 1934. Pp. 215. \$2.00.

The teacher of philosophy who would venture to extend his ministrations to that great unknown, the radio public, could hardly find better models, as far as technique is concerned, than these sixteen talks by the Grote Professor of the Philosophy of Mind and Logic in the University of London. Even in their printed version, the brief expositions possess qualities of warmth, intimacy, and sincerity that are all too seldom encountered in combination with lucidity and succinctness. The first four talks date from January, 1932, and concern "The Modern Dilemma," which consists, according to the author, in the fact that "we must either set our emotions free or destroy the freedom of thought." His solution is the familiar call for "real Christianity" instead of the fear-determined pseudo-Christianity of the present, although an outbreak of the former would undoubtedly make short work of our "makeshift society." The other series of twelve discourses, delivered in 1930, is entitled "Reality and Freedom," and is prefaced by the text of a pamphlet designed to outline to listeners the historical context of the argument. Professor MacMurray stakes his all on a plea for "reality" in both thought and feeling, as the key to true freedom from the bondage of fear and the false morality of social service. "The first thing we have got to stop is the false idea that it is a good thing to serve society and its institutions." The moral ideal is self-realization, and "its essence is friendship." Now few words are susceptible of looser usage than just those expressions "reality" and "freedom" which the author places at the heart of his argument; and the unfortunate result is to import into his philosophizing many of the confusions of common thought, rather than to bring to the popular mind some tincture, at least, of technical precision. But the attempt to teach philosophy in non-philosophical language, as he remarks, is invariably an educative experience for the instructor, if not for his students; and other teachers might profit much from this example, always remembering that American broadcasting differs abysmally from the British variety.

H. A. L.

De l'Arbitraire dans la Connaissance. CH. PERELMAN. (Archives de la Société Belge de Philosophie, V. Fasc. 3.) Brussels: Maurice Lamertin. 1933. 44 pp. 6 fr.

The author has some ideas about the arbitrariness of the postulates on which knowledge is built, resembling those of C. I. Lewis in this country, but inspired by E. Dupréel. He has not developed them very far, nor has he succeeded in expounding them very well.

H. T. C.

Vérité et Révélation. D. DRAGHICESCO. Volume I. Paris: Félix Alcan. 1934. xiv + 491 pp. 40 fr.

This is an ambitious and ingenious application of emergent evolutionism to moral and religious philosophy. God is embedded in the world as a living germ in an egg; evolution is the growth of divinity and its visible incarnation is seen in the infinitude of human aspiration. Beginning with an analysis of magic and ending with a positive religion, the author traces the various forms of the will to the infinite. Primitive man believes magic to be a form of omnipotence. Civilized man believes science will make reality out of ideal possibilities. The actual progress of divinity, however, follows neither the logic of magic nor the logic of natural science, but the logic of values. Evolution is not by continuous variation but by mutations, revolutions, intuitions or revelations. As stages in the life of God human values assume an hierarchic order. At the base are the economic values, since they reveal a relative rigidity and materialistic indifference to the infinite world of becoming. Man rises successively through law, ethics, esthetics, and religion to an increasing incarnation of his infinite craving.

The divergence of this conception of evolution from the merely biological concept of Bergson is obvious. The author's criticisms of Bergson and of other contemporary philosophers are usually incisive and the book reveals a much greater erudition than this summary of its thesis can convey.

H. W. S.

Essai sur les conditions du progrès moral. MARCEL LENGART. Paris: Félix Alcan. 1934. 167 pp. 15 francs.

This essay constitutes one more attempt at a verbal resolution of the ancient and "apparently invincible" contradiction between the ethical demands of the humane individual and of the society in which he lives, between "ourselves and the world." M. Lengart accepts the individualistic basis of the theory of democracy, and confines his argument rigorously to secular terms. His longest chapter is devoted to an inquiry into the dual nature of the moral life. He finds it to be an endless task of coördination of what he calls "personal" action with the ruling customs and traditions of society avoiding both blind conformity and wilful anarchism. Ethics should aim at the realization in their proper order of "the fundamental and truly human tendencies of man"; but what these are, except in a few negative terms, the author nowhere makes clear. So balanced, so vague, and so circular are most of his pronouncements that the reader will find little with which to agree or disagree. Among the general conditions of moral progress, we find a money

economy, health, science, monogamy, peace, and so on; but the accompanying difficulties are skirted rather than faced. There are many footnote references to recent French and German writers on ethics, but the book adds little to the literature of liberal and relativistic humanism.

H. A. L.

Sept leçons sur l'être et les premiers principes de la raison speculative. JACQUES MARITAIN. Paris: Pierre Téqui. 1934. 166 pp. 15 francs.

Whatever M. Maritain writes is worth reading not only for its own intrinsic interest, but for the effect it is bound to have upon his followers. These seven lectures expound in Thomistic terms the principles of identity, of sufficient reason, of teleology, of causality. The exposition is almost entirely logical, not empirical, and therefore becomes persuasive only when one accepts the premises upon which it is based. What these premises are, there is no need to set forth here. For one who does not accept them, the main interest of the book will probably be the nicety of M. Maritain's reasoning, which makes it possible for him to believe whatever seems desirable to him in contemporary philosophy without having to believe in its more disquieting features. (The discussion of chance is a case in point, should any reader of this notice be curious about how he avoids this difficulty.) The book ought therefore to prove very useful to Theists whether Catholic or not.

G. B.

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MIND. Vol. XLIII, No. 172. Verbalistic Tendencies: *Alfred Sidgwick*. The Exoteric Approach to Hegel's "Phenomenology": *J. Loewenberg*. The Christian Doctrine of Creation and the Rise of Modern Natural Science: *M. B. Foster*. Discussions—The Unity of the Universe Again: *F. C. S. Schiller*. Ontological Remarks on the Propositional Calculus: *W. V. Quine*. Are there Vague Sense-data? *V. C. Aldrich*. Spatial Characteristics of Physical Occupants: *S. N. M. Tyrrell*.

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REVUE DE MÉTAPHYSIQUE ET DE MORALE. 41^e Année, No. 4. Voies anciennes et perspectives nouvelles en théorie de la lumière: *L. de Broglie*. L'irrationalisme actuel. Sa nature, ses origines et le moyen de le surmonter: *M. Beck*. Conscience et comportement: *A. Burloud*. L'astrobiologie et la pensée de l'Asie: Essai sur les origines des sciences et des théories morales (suite): *R. Berthelot*. La valeur humaine du Christianisme: *A. Loisy*. Un nouveau traité de philosophie: *M. A. Bloch*. Au sujet de "Gouvernement des Démocraties modernes": *B. Lavergne*.

Lorimer, Frank, and Osborn, Frederick. Dynamics of Population. Social and Biological Significance of Changing Birth Rates in the United States. New York: The Macmillan Company. xiii + 461 pp. \$4.00.

NOTES AND NEWS

We take pleasure in announcing that Professor Theodore M. Greene of Princeton University has been added to our staff of Book Editors.

Philosophy is one of the fields for which Grants in Aid of Research and Research Fellowships in the Humanities are granted by the American Council of Learned Societies. Applications must be mailed not later than December 15, 1934. Awards will be made in March. For information and application forms, write to the Secretary for Fellowships and Grants, American Council of Learned Societies, 907 Fifteenth Street, Washington, D. C.

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SCEPTICISM

IN the old days it was natural, and it remains natural, for intelligent men possessed of some leisure to feel interest in knowing the order of things. The wealth of forms and behavior displayed by living beings, the variety and regularity of sidereal processes, the strange ideals that actuate conscious minds—all these are a source of endless delight for contemplation; and they suggest a deeper order underlying them, the search for which is metaphysics. This search is as difficult as it is vast; but the difficulty is not wholly due to the vastness. Astronomy covers as large a field spatially, and biology as complex a subject-matter qualitatively, as any system of metaphysics ever included; yet the latter has not been able to secure as much agreement as either of the former. The difficulty lies in this, that men do not easily agree about matters incapable of verification by sense; and metaphysics must deal with such intangibles as mind, value, beauty, reason, and so on. The mere fact of disagreement does not mean that some of the metaphysical systems are not true; it does not even prevent all from being true. It might be the case that each system gave a true account of the order of things from a certain point of view. Yet it is perhaps the most difficult thing known to man, that one should whole-heartedly take up the point of view of another; it involves an altruism of which men in the past have scarcely been capable, though there may be reason to think them better able to accomplish it to-day. Consequently we find each great thinker of the past endeavoring to refute the others, and none able to convince those who did not happen to share his own insights. It was inevitable then that the philosophers, sickened by their failure to carry conviction, should lay the blame, not on their own unwillingness to learn from one another, but on the faculty of thought itself. So they sought to purify that faculty by studying its nature. Instead of attending to reality, they attended to attention to see if there was anything wrong with it—as if attention could be found right or wrong before we knew whether its results agreed or disagreed with reality. Thus arose epistemology as a prerequisite of metaphysics. The mind was turned away from reality toward itself; it was a case of ingrowing conscience. Metaphysics, most extravert of all subjects, became introvert. And while in the earlier stage of introversion the study of thought was at any rate a preamble to

study of the real, in the later stage, which is that of present-day logic, it lost even that connection with reality. It turned into a study of the mutual implication of thoughts—thought conceived not as representing facts but as propositions, propositional functions, classes, or relations. By some this is pursued as a *Schachspiel*, a game with counters (symbols) which is interesting in itself; with these we can not remonstrate, since a man is free to amuse himself if he will. With others the hope remains that we may discover some fertile concatenation of terms or relations which will be found to fit real things and thus give a slice of metaphysical knowledge at one stroke.

Nevertheless the same difficulty in agreeing appears in this subjective stage as appeared in the original metaphysics. It is a patent fact that epistemology has not found that certainty or unanimity about the nature and limits of knowledge for which it hoped. As a prerequisite for metaphysics it has failed; as a body of certain knowledge, it is as far from being settled as metaphysics itself. It has not even the excuse of the immensity of its problem: the problem is relatively narrow. Nor has our modern logic done better. The certainties of syllogistic and of arithmetic remain where they were; the logical foundations of these are an object of considerable disagreement. New antinomies have appeared, the solution of which is decidedly in doubt.

In brief, the disagreements and the lack of coercive proof in metaphysics are found in those disciplines which undertook to lay a firm foundation for metaphysics by studying the nature of knowledge and of thought. And with this the modern argument for scepticism is on. But it is far stronger than it ever was; for it has penetrated to the very foundations of all thought. True, the situation above presented gives only the social grounds for scepticism; men are unable to agree, to convince one another on the fundamentals. But that situation seems to suggest that the certainties which men have usually taken for granted can not be grounded. All attempts to find a firm base, even in the nature of thought itself, run against disagreement. The second stage of metaphysics, which is introversion, turns into the third stage, which is sceptical despair.

It is true that one might answer that the same grounds for sceptical despair are to be found in men's pursuit of practical goods. Have we come any nearer to solving the problem of good government than to solving the problems of metaphysics? Is political corruption any less to-day than it ever was? Or have we appreciably decreased the amount of crime or of insanity? Or have we made marriage a more stable institution, or indeed do we know for certain that it should be made more stable? It would be difficult to prove

beyond a reasonable doubt that in these fundamental practical concerns we have made definite progress. But the point is not that there is a warrant for scepticism in these things; they may be no better off than metaphysics, but *ad hominem* argument is irrelevant to our issue. We know that from the social point of view, metaphysics strongly suggests scepticism; and though this is far from being a proof of error for any one view, it does raise a genuine problem, viz., is there any hope that we may attain a certain knowledge of what is real?

Nor can this despair be dismissed by an arbitrary fiat. We can not justly declare that we will refuse to doubt. For after all it is conscience that has brought us to this pass. It is reason's method to seek for grounds of certainty, and for the thinker conscience and reason are one. The case for scepticism must be pursued to the end. And the thesis of the following pages is that the case for scepticism is all but absolute; that the metaphysicians have not yet faced it frankly; that in one sense it is irrefutable while in another it teaches a lesson of the deepest import for our understanding of the real. The mocking laughter of this *advocatus diaboli* at the agonies of an awakened intellectual conscience suggests to the latter a deep and fertile principle which otherwise it would not have learned. The sceptic, like every other recurring philosophic type, makes an important positive contribution (much against his will) to metaphysics. His experiment with thinking is of the greatest utility. The strength of his position lies in this: he can show irrefutably that from the point of view of reason or contemplation there is never certainty that there is anything real or true. And reason or contemplation here includes two and only two alleged grounds of certainty: (1) direct observation or relatively immediate experience, as when we sense a color or a shape or introspect to any datum of any sort and (2) reasoning or inference, where we believe something true because something else is true. These two motives, which constitute rational evidence as used in common sense, science, and metaphysics alike, may or may not be used in separation. Perhaps every datum is tied up at once with some inference, and conversely. Nevertheless the two when combined are often different in degree and thus distinct in nature and may be considered apart. The sceptic then claims that neither direct observation nor reasoning nor both together can meet his denial of certainty of any sort whatsoever. The claim is extreme: no doubter is involved in the doubt; neither object nor subject can be guaranteed—not even the actuality of the doubting process. No quality, relation, term, or otherwise characterized content can be shown real on rational grounds—rational being defined in the above twofold sense. There is no demonstrable reality: such

is the thesis which the philosopher who is conscientious to the limit must face. No common-sense compromise or working postulate is available for him: he is asking if reason can meet the issue.

The sceptical argument begins in an easy and obvious way. Try to prove that some object of thought is real. And let us first take proof to mean that something is true because something else is true. So we try to prove, e.g., that the moon is real for the reason that it is involved in the movement of the tides, and the tides are real. But now we need to prove that the tides are real, and so we appeal to some other object, such as the exposed rocks which in six hours are covered by water. But how do we know that the exposed rocks are not dream-objects? Clearly this process knows no end, and we thus have no proof. So far the sceptic seems justified.

But the believer answers that this is too crude. The mistake lies in trying to prove *one* object by *another*; rather we should prove reality by something that is other than reality. All demonstration, to be sure, proceeds from something other than the thing which is demonstrated; that is the method of reason. But what is there that is other than the real? There is only one thing, viz., our thinking—or, not to assume any connotation of knowledge or reality, our questioning or doubting. The refutation of scepticism should proceed from the fact of doubting, and from that alone. To see this was the merit of Descartes. Descartes marks the beginning of a new and progressively self-conscious stage in thinking—a stage which has largely constituted modern philosophy up to the present day. And as all know, Descartes answered that doubt at least is real, and contains a doubter and his ideas and thence an objective reality, and so on. How then is the sceptic answered by the argument from doubt? As a matter of fact, he is not answered at all. If reality could be proved from its opposite, which is doubting, the ontological proof of God would be dwarfed into an insignificant achievement. How could it be that we could go from the very opposite of reality—our subjective doubt—to reality itself? It has often been objected that Descartes did not prove a permanent Ego which doubts; but the objection, though correct, does not penetrate to the real lacuna in the argument from doubt. The fact is that doubt, once entertained methodically and sincerely, applies to itself as to all other things. How can we be certain that we are doubting? We may for the moment feel sure, but are we sure at the next moment? Is memory, of however short an interval, infallible? To say that it is, is to beg the question. Where is the demonstration of its infallibility? Descartes simply assumes without evidence that we are certain that we doubt; and this is already to assume the reality of the event of doubting. But while we are about it we might just as

well assume the real presence of the object; the one assumption is as well, or as ill, justified as the other. The proof of reality from something else begs the reality of the something else—the event of doubting—and hence is no more of a proof than was the argument that a certain object is real because another is real. True enough, we believe that we doubt, and also we believe in a real external world; but the belief is so far not grounded on evidence; it is not rational but irrational or superrational. True enough also, we could not go on thinking at all unless we assumed some real fact as ground or guide of the thinking; but that is not evidence, for why *should* we go on thinking? The sceptic claims only that there is no evidence of a reality and no certainty based on evidence; and we can not deny his claim. Once we embark on the method of grounding one belief on something else, no matter what that something else is, we can not stop except by arbitrary fiat.

Or shall we resort to the other mode of rational proof and appeal to immediate self-evidence, as needing no grounds? That was what Descartes also did, when he urged that the clear and distinct was its own guarantee of certainty. But we can see at once that “clear” and “distinct” are relative terms; nothing is wholly clear and distinct. If it seems so at present, the pale cast of thought soon clouds it over. The trouble is that certainty is never mere present self-evidence, but means a denial of the possibility of later doubt. Certainty has a reference beyond the present datum. The certain, and with it the real, is not the unshaken, but the unshakable. And there is in the present datum, whether it be object or subjective doubt, no warrant for the denial of the possible later doubt of itself. Self-evidence is no more secure than evidence from something else. This, then, is the sceptic’s position: rationally justified belief means belief on the ground of something else or on the ground of immediate self-evidence, and since neither of these grounds is forthcoming, there is no rationally justified belief. The awakened philosophic conscience sees this, and is not satisfied when it is told, in the language of common sense, that we have to assume certainty and therefore reality and should not look for proof of these. Conscience goes deeper than practical convenience. The whole question concerns the place of reasoned belief in life; and if it is not fundamental, where is the thinker’s criterion?

Common sense, the healthy-minded extravert, avoids these self-tormentings, not by overcoming, but by ignoring them. But the quest for certainty can in the end no more be argued away than the quest for health; and as intelligence advances, the claim of scepticism must be either met or accepted. Yet this result is so at odds with the verities of everyday life that we feel it can not but be

wrong. There is, we declare, at any rate one certainty, and that is that the sceptic is wrong. He has degraded reason, and surely there must be a way of answering him. And other ways than those of Descartes have been proposed; let us take them in turn.

First consider the most superficial, which runs as follows: the sceptic refutes himself in the very act of defining his position. He talks to fellow-beings in whose existence he believes; he assumes in his speech and thinking that terms have a constant meaning, that time goes on, that memory is to some degree reliable, that the principles of the syllogism are correct, and so on.

This argument is superficial because it does not see the real point of scepticism. That point is not that men do not have, or assume, a certainty of something real or true; it is that such certainty can not be justified on rational grounds. The argument as it stands is only *ad hominem*. The sceptic talks and shows that he does not believe what he says. But the philosopher with his self-accusing conscience may retire to the study and, being alone, realize that he himself feels those difficulties, even though the sceptic did not believe in them. The philosopher asks himself if he is sure *on rational grounds*, of the existence of his fellow-men, of constancy in the meaning of terms, and so on. Perhaps they are implected in thinking, but the thinking will not be rationally justified unless they are justified; and are they? How can he be sure that *red* means now what it meant a little while ago, that it means the same to you as to him, that number means always the same thing, etc.? The same trouble comes up here as in the case of doubting. Am I sure that I am now doubting? Have I not found sometimes that on reflection I was less sure than I thought I was? Often we find that what we think we believe we do not really believe; many a man thinks he believes in God (because he goes to church, prays, and says that he believes) yet would not be willing to stake a large sum of money on the existence of God. If this is true of belief, it is true also of doubt. If it is true of doubt, it is true of the constancy of meanings. We simply do not know how much of our present assurance later reflection will dislodge. We assume a practical certainty as a *modus vivendi*; we do not find in the present datum any absolute bed-rock of certainty on which to build a firm structure of knowledge. This sceptical state of mind may be derided or cursed as morbid and pathological, and no doubt it is such. The important point is that we recognize that there is no rational escape from it.

Another proposed answer—little less superficial—is that we can not doubt any datum or any reasoning except on grounds—which grounds are taken as certain. The appeal here is to primitive credulity: the child believes his sense-experience, the stories told him,

his dreams, etc., and only when these turn out to be misleading does he begin to have doubts of anything. So he doubts only on grounds or tests of certainty. But the answer should be carried further. The sceptic, arrived at the stage of self-conscious thought, finds general grounds of doubt in the fact that no conclusion seems unshakably certain; all attempt at proof is either circular or dogmatic. His ground is that there is no ground for certainty. Looking for certainty, he finds none, and he simply announces that fact. If he is accused of having used a syllogism in *Camestres* to build up his case (whatever is certain is rationally grounded; nothing that is experienced is rationally grounded; \therefore nothing that is experienced is certain) he will answer that he can doubt the syllogism (which indeed is not proved, since there is no way of *proving* that a general dictum applies to this or that particular case). Thus he comes to doubt on grounds of general reflection, but then finds that he can doubt those grounds also. As often as the believer provides an answer the sceptic declares that that answer is dubitable: no demonstration of it is at hand. But the genuine sceptic is careful not to go too far and affirm the universal justification of scepticism. That would be a positive statement and a general principle valid for all. Rather he says: I find no certainty now, but I am not certain that I may or may not find certainty at some time. He is not a systematist, but an opportunist. He doubts each particular claim to certainty as it comes; his is the attitude of watchful waiting rather than thinking by universal principle. Therein lies his strength: he lies back and says: you have not yet proved any certainty.

But now comes another and quite different way of meeting the sceptical attack. Hitherto we have tried to establish some initial certainty from which to proceed by sure steps till the whole system of knowledge is built up. But this, we are now told, was a misunderstanding of reason. Reason does not go from a single and isolated certainty to other certainties. There are no isolated certainties. Reason is mutual and organic; no particular datum or inference is certain by itself. The consensus and coherence of all experience is the only warrant of certainty to any of the parts. Knowledge does not start with certainty, but acquires it. As man's life proceeds from infancy to maturity the true and real gradually assume their places, grounding one another in the total scheme of things, while that which is inconsistent with them falls away into the limbo of unreality. This new way of meeting scepticism is very plausible; it seems to fit human experience. Our dreams, our reveries, our false scientific hypotheses, are discarded for just the reason that they do not fit the great bulk of our observation and inference. Here, then, it seems, is a way of satisfying our inevitable trust in

reason which is proof against sceptical attack. It enables us to believe something true because something else is true without having to ground all belief on some ultimate assumption which is unable to guarantee itself. The whole issue is taken up into a higher dimension; knowledge is not linear but a rounded circle.

It seems as if the sceptic's teeth were drawn here; he can not bite into any particular affirmation of certainty, since there is no certainty of any one thing by itself. Nevertheless the believer does claim that we are certain of our external world, of our fellows' minds, of the laws of science—because they fit into one coherent system; and the sceptic observes that that system bears the burden of certainty, and concentrates his doubts upon it. Of what perceived and inferred contents is it composed? Not of all that we have in our experience, certainly. Many of these, no doubt, fit one another nicely: such are the accepted facts of daily life and also the proved truths of science. These two, however, do not quite square with each other; witness the secondary qualities which do not find a place in the scientific cosmos, yet can hardly be dismissed as fictions. The colors, however, form a well-ordered system by themselves, and so do tones, and to a less degree smells and tastes. The world of dreams coheres with little but itself; the system of moral ideals, internally coherent no doubt, fits neither the physical nor the psychological realm at the present reading. The internal make-up of the great works of art, the Hamlets, Antigones, Iliads, symphonies, etc., is beautifully coherent; but how do they fit the world of astronomy, or of electrons, or light quanta? Thus we have not one great system of interlocking parts, but many such systems, some larger, some smaller, some better and some worse organized. Which of these is to be the nucleus about which reality arranges itself? Which system is the one, coherence with which is the test of reality and the purveyor of certainty to our belief in it? Not the largest, of course; that would be a decision by majority vote and quite irrational. Shall the nucleus then be the world of perceived physical objects, on the ground of the superior certainty of these? The sceptic has already found that there is no intrinsic certainty in sense. In fact, we can see at once that no particular sphere of our experience offers an indubitable assurance that it is a privileged centre about which the rest must arrange itself in a system. To reach a final certainty we must have some degree of certainty to start with; but where is that to be found?

"If the believer answers that it is never found in finite intelligence but only in the absolute idea, his position seems to differ but little from that of the sceptic. Certainty is put off to an infinite distance; if we have it now in any degree, that is because we already

assume it in the finite objects of observation and inference; if we have it not in these, we never reach it. True, we may feel assured that somehow it must be, but if we can never be sure that this or that particular thing or event is real, we might as well not assume it for an absolute knowledge which we can never attain. As matter of fact, the absolute idealist has not really met scepticism at all. He has assumed at the outset that we are confronted with being; being was the first Hegelian category, and all that followed was but an elaboration of the meaning of that category. If the absolutist does not assume being at the beginning, he will never reach it. Now just that is what the sceptic will not assume; there is, he finds, no warrant for the title of being for any content that we have in our experience. Such content, so far as we can see, always wavers and becomes uncertain for reflection; we can not even surely say that we had it, for we can not prove that memory is reliable, and we are not sure that any experience which we thought we had, we really had. Once more, no content of experience is self-sustaining against doubt. And how can we find coherence until we are sure of the elements that cohere?

So we have found certainty neither in isolated or initial things nor in systems:—what way then is left? There seems to be only one way, and that is a compromise-measure. Let us no longer claim perfect unshakable certainty that there is something real; let us frankly adopt a concessive attitude, and admit that it is all a matter of probability. This is a candid and sporting attitude; it assumes the risk of failure. It is, perhaps unconsciously, an appeal to values; it grants that certainty, like perfection, is an ideal goal never quite attainable. There is more or less of uncertainty; it will have practically the value of certainty. Instead of the unbounded optimism of the rationalist, or the pessimism of the sceptic, we have here an epistemological meliorism.

The argument is something like this: the agreement of our present experiences, our memories and our inferences from the behavior of other persons, gives a strong probability that all these are real, or based on the real. The chance of error decreases as our experiences go on agreeing day after day, until scepticism has practically no ground left. It is extremely unlikely that such consistency and repetition should be forthcoming, if there were not an objective ground for it.

Now the sceptic might at first reply that probability can not be applied here, because there is, so far as we can see, an indefinitely numerous series of possible experiences. Grant that our present experiences are uniform and consilient; we know not what they will be, and therefore the agreement of any finite number, however

great, gives no definite probability. An infinite number to come might all go the other way. One hundred agreeing experiences, as compared with an infinity of experiences, gives no greater probability of truth than a single experience. If we toss a perfectly symmetrical coin long enough, we shall get a run of one hundred heads. And that run might occur at the very beginning. But that is no ground for believing that heads predominate over tails. It may well be that our present agreeing experiences, however numerous, represent a run of like character; as compared with the infinity of possible experiences, there is no estimable probability that they reveal a reality of constant character.

But the reply itself is not up to the standard of genuine scepticism. It assumes much that is not demonstrable. It assumes that we *know* that our experiences agree; that our inferences from the reports of other men are *absolutely* correct; that our arithmetical knowledge is absolutely demonstrable. The sceptic has already pointed out that although we do feel sure of these matters, they are from a logical point of view pure assumptions, quite groundless, and indemonstrable. There is no guarantee of a logical sort that all this is not a dream. We can doubt it if we will; it is all intrinsically dubitable. There is, for contemplation at any rate, no absolute bed-rock certainty about any datum or sensum or perceptum or cogitatum whatsoever. And that being so, there is no basis on which probabilities, even in a finite series, might rest. Probability, in short, rests on admitted certainties; these it can not demonstrate, and without them it can not work *in vacuo*.

I do not know of any further way by which one might attempt to prove that we have on rational grounds certain truth or certain knowledge of reality. We have tried three ways: first, by seeking an initial self-guaranteeing certainty, second by seeking a final certainty resting on the mutual support of many uncertainties, third by seeking a progress toward never-attained certainty. Each of these ways, we found, had to assume a certainty without ground, and this spells the defeat of reason in its battle with scepticism. For reason, as over against unreason, means justification for a belief; a justification afforded by mere contemplation or by reference to something else which in the end is matter of mere contemplation.

Nevertheless none of us are sceptics in this absolute sense. We do believe that some knowledge is certain; we believe in one another's minds, in an external world, in arithmetic. Many particular assertions we doubt, but we do not doubt that there is a reality and that we know some of its traits. The perfect knowledge which is the ideal of metaphysics we may not have yet reached, but we are sure of some things, e.g., those things mentioned just now. And we

can not possibly help admitting this much. Plainly, then, some other factors besides rational evidence are at work. Evidently scepticism can be met on other grounds than those of reason. What, then, are these grounds?

They are values.

Men act; and from various motives. Let us for the moment consider the case where a man acts to escape from some painful situation. Crossing a street after an all too careless glance at the speeding vehicles, he suddenly finds a heavy truck bearing down upon him in front, while a fast-moving car threatens him from behind. With a quickness born of danger he estimates the chances of dashing ahead of the truck or dodging back to escape the oncoming car; and let us suppose that this estimation of the chances is so much to the point that he is able just to avoid the truck by a powerful leap ahead. Now in this situation there is little room for scepticism on his part. The painful stimulus of danger precludes doubt. He knows that he is in the presence of something; for to act is to believe in that with reference to which we act. But the belief again is a necessary one; for the action is a necessary one, made so by the painfulness of the situation. The value-quality, then, is the source of the impossibility of doubt.

There is a certainty native to the experience of values. True, it is not always found; but often it is, and always when the value is great enough. A slight bodily discomfort, too near the border-line of indifference, may be matter of doubt. One does not know, perhaps, whether the cool breeze blowing over him from the raised window is uncomfortable or pleasant. But when one does know it, there is no possibility of doubting, during the experience, that it is really here. For contemplation, without valuation, on the other hand, doubt is always possible. The sceptic may say "I am not sure that what I now see is really what it seems to be." But when the sceptic is in intense pain, he can not say "I am not sure that what I now feel to be pain is really pain." It is not that he is too busy trying to get out of pain to reflect at all; he does in the very feeling of it, contemplate it, and what he finds is indubitable. This is one clearly marked difference between valuation and pure contemplation.

And because pain is, unless some external power prevents, inseparable from action, and action is always upon some object or situation, pain communicates its own certainty to the object or situation. For the painful is that which *ipso facto* we try to get rid of. Not that this is necessarily a sufficient definition of the painful; there may be a specific *quale* also. But it is an essential attribute whenever the painful is above a certain light intensity. And so we

must say in general that whenever one acts to rid himself of something painful, he can not possibly doubt the presence of the painful object. That object may be something about one's own body, or some threatening thing like the motor truck, or some social situation that causes grief or shame or resentment. But in all cases it is something we acknowledge in the very act of acknowledging its painfulness. Yet it is not enough to point to the indubitableness of pain as a feeling-state. If there could be a feeling-state not connected with action, that state would give no warrant for an objective reality. But action has an object; it is upon something. And this something is what is real; it is indeed the primary reality (not the ultimate reality) of human experience. It is other than ourselves; for we act on it to remove it.

But we have not yet reached the full meaning of reality, so far as reality is something denied by the sceptic. Let us return to the case of the man confronted by the onrushing truck. He acts to avoid threatened injury. But he would not act as he does unless he saw that the truck was moving at a certain speed, was heavy and crushing, and was close to him. His action is based upon his observation; and in observing he is passive. However short a time his observation may consume, he is for that time still and contemplative. Even though the contemplation is itself an act, the act consists only in the straining of attention; careful looking, thinking of the speed and momentum, inferring of the consequences of impact upon his body. The act of attention does not affect the motion of the truck or its implication of consequences to himself. The activity that lies in his observation is not one that affects the object he observes, but only his own sense-organs and perhaps his brain. In regard to the truck, his attitude is wholly one of respectful deference. In fact, the reality of the truck is for him the fact that it is to be observed with respect, as the source of data which determine his action. Thus the contemplative attitude enters into and finally constitutes the meaning of reality. The real is that to which in action we must pay regard, which we contemplate in passive docility as a source, with a nature of its own, of whatever good or ill may come to us. And this gives us, I think, the full meaning of the real. It is that upon which we act, yes; but it is also that which we look to with humility, letting our knowledge and subsequent action be determined by something which is, so far, beyond and above them—beyond and above in the sense that it dictates what is to be done. And it may be noticed also that the very quality of being interesting belongs to its object just in so far as it is something with a nature of its own, quite transcending our minds.

We have taken as illustration a case of bodily pain, or threat-

ened pain; but a case of pleasure, or expected pleasure, or any other form of evil or good would have done as well. All conscious action is *sub specie boni*; all conscious action is upon or in reference to some source of good or ill whose make-up we learn in order to secure the good or avoid the ill. In fact we have to learn it, because we have to seek good or avoid ill; we have to respect the object and the nature of the object. Scepticism is not permitted; the real is that which we have to respect, as we have to seek the good. Thus reality is a value, and being a value is not open to doubt; for it is a condition of that pursuit of the good and avoidance of evil which constitutes living, and normally at least we can not help wanting to live.

Contemplation has to be trusted because it is the *sine qua non* of action that has to be performed. And if so, contemplation gains a measure of authority. True, it contains by itself no obvious reality-coefficient. Taken as mere presentation of some content, it is always open to doubt. It is too docile and meek, with its attitude of servility before the real, to repel any suggestion of falsity. It believes, not because of any self-sustaining quality, but because it must furnish data needed for action. Thereby it becomes an indispensable factor in life, and being indispensable, must be granted the right to work in its own way—subject always to correction by the test of viability. Now the way in which contemplation works is, we have said, a two-fold way. It uses either the method of direct vision, or that of coherence between presented contents; and when fully at work it uses both. These two, which contain of themselves no criterion of reality, forms a necessary but not a sufficient condition of reality. What is presented and coherent may be real; if it is a prerequisite also of necessary action, it can not be doubted. Thus the sufficient condition of truth is the union of the contemplative criteria and the criteria of successful action. If our systems of metaphysics could be tested by their indispensableness for daily living, they would no longer remain doubtful. Nevertheless the being of an external world and of fellow minds is thus indispensable; and no one doubts these. The doubtfulness of a metaphysical system is not concerned with these elementary matters, but with some particular assertions derived from contemplative analysis of the real. General scepticism has no longer a status.

But the sceptic has one more objection. Granting that we have to believe in an independent reality, whose nature we must passively receive into our minds—how do we know that what we do receive into our minds is precisely the nature of the real? Even the test of action does not seem to be conclusive. I estimate the speed of the onrushing truck and leap to safety; but perhaps I should have been safe anyway, since the driver is about to put on his powerful brake.

How do we know that that particular element of the real which we rely on is just the element that enables our act to be performed? The rational tests of observation and coherence are never quite complete. Grant that we can not possibly doubt, when we act—as act we must—that the situation has a power over us which is equivalent to reality, do we ever know certainly that the way in which we interpret the situation is precisely the true way? Something true it must contain, but what elements of it are true and what are not? And if we do not know this, of what avail after all is our alleged assurance of reality? To be assured of something real while at the same time we are quite unable to say certainly what it is, is no better than not to be sure of reality.

The answer is that the sceptic confuses one sort of imperfect certainty with entire absence of certainty. The imperfect certainty of our best-guaranteed beliefs is certainty about a whole with uncertainty about its elements. We know that the truck is real and its momentum is threatening; these we never come to deny. If we doubt them later, we could verify them by a similar experiment; and indeed we verify the truth of our memories by taking them as grounds of action, so that there is no general scepticism of memory. But though the truck is real and its momentum threatening, we need not thereby know all of the conditions that make it threatening—such as the construction of the engine—or those that might remove the threat—such as the application of the brakes. We do know the general situation, but we do not know all the details, actual or possible. Complete knowledge we have not got: partial knowledge we have. And the partial knowledge is no more erroneous than it is erroneous to say that a feather falls under the law of gravitation even though the wind blows it away from the vertical descent. Such certainty as we have, which is really a certainty about the real object, is unshakable.

But let us consider a more extreme case, in which the certainty inherent in action seems at first sight open to later doubt. Consider the case of a hypnotized subject. He believes, upon suggestion, that the chair he is sitting on is a hot stove, and leaps up. He is no doubt right in believing that there is some reality there, but he gets its character wrong. Or take the instance of the dreamer, whose nightmare presents to him a ferocious monster against whom he ineffectually struggles until he wakes with a groan. In both these situations there is action to avoid pain, but the judgment is largely erroneous. Conviction as a psychical state may be claimed for it, but not the certainty which would meet the sceptic's position. As a matter of fact neither the hypnotized subject nor the dreamer does have the inquiring or contemplative attitude at all. They act in-

deed; and there is a real situation with reference to which they act. With the one it is the chair and the whispered thought of the hypnotizer; with the other it is undigested food in the stomach. But neither contemplates the object; neither believes what he believes as the condition of action. And it is not an argument for scepticism that one believes without looking for evidence. The implicate of action as a test of certainty is that one looks at the object, which no doubt is real, in order to ascertain what in that object is the power to be respected. Action without contemplation gives a "that" without a "what"; so far there is certainty, but only of being; the character is quite uncertain. Contemplation without action, on the other hand, gives no certainty at all, either of character or being.

When we act, as indeed we all do, we know beyond doubt that there is reality in the sense that there is something not ourselves which has power to determine our action for good or ill. We also know beyond doubt that this power lies in certain moving objects which we call physical, or in certain mental and physical objects which we call our fellow-men. We know that the properties of numbers are true. All these we have tested and continue daily to test. We can not doubt them. We have to believe them or die. Doubt of them may be verbally suggested, but it has no positive meaning. But concerning the details, the implications, the interconnections of these, we have a good deal of doubt. We do not know just what in these characterized realities is the locus of the real, and what is perhaps erroneous accretion. And the reason is that contemplation as to details goes further than the test of action can go. We do not see that space, or time, or matter, or selves, must be of precisely such and such a nature, in default of which we should be unable to live. Much of their detail appears to be indifferent to those things which we have to believe. If there were some way in which we could connect our metaphysical theories with the demands of daily action, we might find an irrefutable proof of them. Is there such a way?

I think there is one and only one; and in the course of the above argument pushes irresistibly to this conclusion. If we could be aware of an object that was intrinsically and wholly good, in the sense that everything about it was the indispensable and sufficient condition of our acting, that object would present an instance of absolute certainty as to both being and character. Such an object we do not get in daily sense-experience; for many of the details of physical fact are not bound up with the necessity of action. Nor do we get it in even the most advanced field of knowledge of the material world, viz., the sciences of physics and astronomy. We are not yet sure whether the material universe is an expanding one or an enclosed sphere or other figure; we do not know whether matter consists of waves or

particles. We do not have to believe that the nature of matter is nothing but energy, or die. Is there then any being such that when we become aware of it, we see that unless we accept it we can not continue to be without its aid?

The religious mystic tells us that there is such a being. He claims that in his ecstasy he is aware of one who is so bound up with the needs of our life that it is impossible to doubt the being of that one. The character of that being is thus wholly good, even though the details of his goodness may not at present be known. But everything that is known about this being shows him to be the indispensable and sufficient condition of the mystic's own living. Now it seems to me that this experience of the mystic offers a case of absolute certainty. Contemplation of the being is not in any way divorced from action: it is not speculation beyond verification, though it is knowledge of a fact that is transcendent of the mystic's experience of it, as is all reality above and beyond our experience of it.

But unless one has an experience of this sort, he will always be to some degree uncertain as to the precise elements that are real. His metaphysics will be begun, but not finished; though, of course, there is no ground for declaring that it can never be finished. He will not be sure of ultimate reality; but he will be sure that the vague and broad assertions that he has to make are true in some point or other. True statements, absolutely true statements, he can make. There are living beings, minds, bodies; these are many; they are in time or space, they live and die. There is no doubt about the truth of such assertions. There is doubt about what in these facts is the indispensable element that is real and what is negligible because not verifiable as condition of action. The only metaphysics that is indubitable is one which has discovered some object that is wholly indispensable if we are to act at all.

Nevertheless even at the end there is something in the sceptic's position that can never be met and never be refuted. If he can refuse to act in any way, we have no hold upon him; he can not then be convicted of believing anything. The inactive types of man—those who by some accident perhaps of fortune are not driven to the struggle for any practical good—may refuse to act; or may act so little that they speedily forget the implicates of their action. Such men will remain sceptics, because they forget, when they begin to think about reality, the experiences in which they assume real food, real cold, real threatening external bodies, and the like. Forgetting these, they see clearly that they have otherwise no proof of anything independent of their thoughts, and they remain sceptics. If one could exercise a certain freedom of will so far as to refuse all action, he would perhaps not live very long, but as long as he con-

tinued to live he would rightly remain a sceptic. True, few if any men do so; true also, one who did so might be called insane. But that would not prove to him, or to any one else, that he had a good ground for belief in reality. He would in fact have no ground for such belief. The grounds are there, if he will but consent to look for them; but he can not be compelled to look for them and therefore he can not be convinced. In this sense scepticism is open to any one who has a strong enough will to remain quiescent in the face of all the emergencies of life. It is quite irrefutable. But of course that does not mean that there are not grounds for refuting it ready to be discovered if one wants to look for them. It means only that anybody is free to refuse to look. In this sense certainty is a prize which is offered only to those who are willing to struggle for it. And that certainty is attainable only because reality is at bottom a value-category. Nevertheless the very meaning of this valuation is that there is something other than our minds, antecedent to them in the sense that our minds must passively await to be informed of its nature, which is an independent source of their information.

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THE DATE OF A TEMPORAL PERSPECTIVE

THIS discussion will be confined to spatial and temporal attributes of events in perspectives, to their sizes, shapes, and dates. The attributes will be termed appearances or sense-data with the proviso that they are taken in abstraction from the "secondary qualities" which, in fact, may go together with them. The issue is whether these data in perspectives are located at the events of which they are appearances or at the station-point of observation. If the first alternative is true the observer may be said to perceive the original events themselves, though it may be merely a side-show; if not, one must accept a representative theory of perception. The choice of the alternative depends on the interpretation of perspectives. If a perspective is "taken seriously" it may be described as an objective cross-section through the world, accessible from the corresponding standpoint to any observer. And this description is, in its turn, allied with the doctrine that there are external and internal conceptions of points and that whichever is taken, points have no meaning in isolation, but only as interlocked with other points. The external conception is that of geometry, where points as *relata* of systematic relationships are exhibited by the interrelated properties of geometrical figures. Taken internally a point is a standpoint, i.e., a way to have other points presented in a certain vista. A standpoint and a perspective beyond it are thus correlative terms.

In a recent contribution Mr. McGilvary supports the objective status of visual perspectives very effectively.¹ He points out that if sense-data were at the station-point they would be practically identical with the so-called picture in the "picture-plane" at the station-point. Now the picture in the "picture-plane" is the drawing of the data of a visual perspective on a plane surface perpendicular to the line of sight. The very wording of this explanation involves a clear-cut distinction between the visual perspective and its drawing in the "picture-plane." And the distinction is just this, while the perspective drawing is at the place of the percipient, the data of the visual perspective are at the event perceived. This is not meant to be a decisive proof, but it makes very plausible the theory that perceived shapes and sizes are at the event. The objection that a single event can not have more than one specific shape and size whereas the data of different perspectives on the same event are different shapes and sizes, is answered in the usual objective-relativist's manner, to the effect that there is no contradiction in attributing to the same thing different sizes and shapes provided each is attributed not absolutely but relatively to the corresponding stand-point. Thus the famous penny is at once round and elliptical but from different points of view. Shape and size are relative properties, they are at the event perceived but from the station-points. To this relativity Mr. McGilvary adds another, viz., the relativity of sense-data to the physical conditions under which the perspectives are realized. A perspective as a conditioned complex is distinguished from its conditions. Thus the shapes and sizes in a visual perspective are conditioned by the distances and directions of the light-rays involved. But to be thus conditioned merely means to correspond to or to be a mathematical function of the physical conditions, it does not mean to be physically caused by them. This distinction disposes of the argument that the sense-data must be at the station-point because they are messages physically carried by the light-rays. It also frees the space-time relationships within the perspectives from being slavish replicas of the order of space and time which their physical conditions have.

The last consideration is significant in dealing with a difficulty of visual perspectives involving time.² In case of a distant event the realization of conditions under which the perspective data appear may require time during which the original event as the source of the conditions ceased to exist, so that the spatio-temporal status of the

¹ E. B. McGilvary, "Perceptual and Memory Perspectives," this JOURNAL, Volume XXX (1933), pp. 309-330.

² Of course, any visual perspective involves time so the point in question is crucial to the whole theory, but the difficulty of the theory is noticeable only when the data are at a considerable distance from the station-point.

appearance within the perspective presents a problem. Suppose a spot appears on the sun at noon. It takes about eight minutes for the sun's rays to reach an astronomer on the earth. Therefore when the astronomer sees the spot he must see a past event if he sees the original manifestation. "On the arrival of the light at the earth, what is *included* in the perspective is physically past." This physically past event, according to Mr. McGilvary, is nevertheless visually simultaneous with the earth's event of sighting the spot. This consideration, he holds, solves the paradox of seeing the past by reminding the reader that perceptual simultaneity between the occurrence of the spot and the spot-sighting is within the conditioned complex of the perspective which need not reproduce the physical sequence of these events characteristic of the physical conditions.

But, certainly, the solution does not reach to the root of the paradox. When a certain event at the sun (the emergence of a spot) is replaced eight minutes later by another (the displacement of the spot to the right, say,) the first vanishes unconditionally and not only relatively to a would-be-observer at the sun. There is no possibility of acting anywhere except in the present, but to be an event is to be acting, hence when an event is relegated to the past "it" ceases to be an event. "It" can not be perceived (after it was replaced by another event) either at the sun or from the earth or from any other place for the simple reason that there is no "it" any longer in existence.³ But let that pass. Let us grant that there may be a way of preserving a past event in its full originality for perception in some perspective.⁴ Even so, the spot observed by the astronomer is not a past event. For if it were there should be a time and a place when and where it was present. But there is not any. Certainly it was not present eight minutes ago at the sun. The spot which emerged then at the sun was immensely large in comparison with the spot sighted at 12:08 by the astronomer. This large-sized event is, of course, inaccessible to an observer on the earth. And a spot of the size and the shape perceived by the astronomer could not be registered at 12:00 by any one; an observer at the sun could register only the much larger emergence; any distant observer could not register, then, any emergence at all. But an event which is absolutely inaccessible to experience can hardly be said to exist; at least it does not exist as an actual event.

³ On McGilvary's view an astronomer with a power of telepathic vision might see at once, with one eye, the spot which is physically present and, with the other eye, through the telescope the earlier spot which is physically past, both spots in original and at the same place. This, I am afraid, is a *reductio ad absurdum*.

⁴ The general Theory of Relativity may be interpreted as allowing for this possibility.

The weakness of Mr. McGilvary's theory about the date of perspectives can be remedied, retaining his main point of perceiving events in original, by applying to the complications of time exactly the same argument which was mentioned as dealing with sizes and shapes. A penny, or a sun's spot for that matter, have different shapes and sizes in different perspectives. The largest size together with the corresponding shape is the one which is not only located at the event, but can be determined there by measurement; all others are described from distant station-points. Also the emission of light-rays from the whole area of the largest datum is a physical condition which is indispensable for the appearance of the other shapes and sizes. Nevertheless these smaller appearances of various forms are just as physical, if physical means measurable, as the largest one; they are not mere distortions representing the latter, but have their own original place. To say that they are at the event does not mean that they are all enframed in the largest aspect of the event; it merely means that the event is where they are. Now translate all these assertions in terms of dates, i.e., substitute "date" for "size and shape." There are many dates at the spot coördinated with the different sizes. Only one of these dates is observable at the sun, this is at noon, the date of the emergence of the largest appearance of the spot. All other dates are in the perspectives from a distance. And it takes some time after the emergence at the sun before they can be registered. But this does not make them less physical, nor does it make them participate in the date of the largest appearance. All appearances have their own dates. And to say that they are the dates of the same event means that the event partakes of different local times.⁵ The question is how all these dates are related to one another. They may be, of course, correlated indirectly. The date of the largest appearance may be called the date of the local physical time. All other appearances can not be said to be of this same date except as potential entities for future observation, for they do not appear at noon to anyone. As actual data they must be given the time when they are first observed or rather when they could be first observed from the corresponding station-points. These dates are always later than the local physical date of the events so that the spots sighted from a distance are rather in the future than in the past of the local spot. But this is an inaccurate way of speaking. There is no future time at which the smaller appearances of the spot could be given to an observer at the sun. Thus in relation to what is observable at the sun all other

⁵ A certain similarity in terminology must not be misunderstood in confusing the plurality of local dates as described in the text with the different time-coördinates of the same event with respect to systems of reference in relative motion.

appearances of the spot are neither in the past, nor in the present, nor in the future. They are all temporally disconnected; each date has a definite meaning only within its own perspective system and is independent of the dates of other perspectives. Also the dates of perspectives, though conditioned by certain temporal relationships, are not mere replicas of the latter. Thus when the light-message from the sun reaches the astronomer on the earth, the source of the message, the largest appearance of the sun's spot, as an initial condition of perspectives sinks into the past; but the event of the spot's emergence is not thereby relegated to the past; it survives in the smaller appearances within the conditioned complex of the astronomer's perspective. This observation fits in with Mr. McGilvary's important distinction between the dates of the physical conditions and the dates of the corresponding visual perspectives.

There remains a doubt about the nature of events. The mere description of an event as an act does not raise any particular difficulty. There is an act which is an appearance to some observer at the place of the appearance, and there are acts which are appearances at the same place but from distant station-points and it is all these acts together which constitute a single event. But an objection will be raised that an event is not merely an act but an agent-act, so that if there is more than one act there is more than one agent and not a single event. From this point of view the event of the emergence of the sun's spot is identical with the enactment of its largest appearance and after this is gone there are new events which are merely representatives of the original occurrence. At best they can be tied up with the original as potentialities of other appearances and not as coexistent events. This seems to me fundamentally correct but merely verbally different from what I am trying to say. But, in the first place, the distinction between actuality of the largest appearance and potentiality of the others is hardly a fundamental one. The largest appearance is a mere potentiality to the distant observer. And even at the sun it is likely to be potential, since the observer there is purely hypothetical. Of course, in a broad sense of the terms observing or experiencing, the emerging spot may be said to experience itself. But, certainly, not in the sense of a visual datum of a given shape and size. However the experiencing connected with a place of an appearance is important enough to be the condition for giving the date of experience to the associated place. This determines the physical time of the event at the place of its largest appearance. And since the other appearances are experienced elsewhere they must be given the dates of their registrations at the station-points. These are the dates of temporal perspectives.

A. USHENKO.

UNIVERSITY OF MICHIGAN.

BOOK REVIEWS

Der Kampf um den Lebenssinn, unter den Vorläufern der modernen Ethik. DAVID BAUMGARDT. Leipzig: Felix Meiner. 1933. xi + 384 pp. 15 M.

This is the first of two volumes devoted to an historical and critical study of certain crucial phases of man's struggle to determine the value of human life and the nature and significance of morality. The Preface contains a brief but spirited defense of the value to contemporary philosophical thinking of such a reëxamination of various contrasting historical positions which embody vital moral insights or exemplify illuminating mistakes in ethical theory. The title is indicative of the author's "Widerwille gegen die empörenden Tautologien, gegen die Phrasenhaftigkeit, gegen das absolut Nichtssagende zahlloser moralsystematischer Sätze" (vii). He proposes to cut through all this empty verbiage and see whether earlier thinkers, sympathetically interpreted, may not be able to help us to achieve a better understanding of ourselves and our spiritual problems.

In this volume two sharply contrasted eighteenth-century positions are examined in detail, namely, Kantian rationalism and anti-rationalistic romanticism. The author interprets Kant as wishing to define and establish morality without any reference whatsoever to empirical moral facts, i.e., in terms of pure *a priori* reason alone. He therefore seeks to appraise Kant's arguments and conclusions in terms of the purely rationalistic criteria which Kant himself insists upon. Unlike many critics of Kant, who see in the structural similarity between the first and second *Critiques* a mark of Kant's deplorable love for architectonic, he attaches great importance to the methodological parallelism between the two works. He finds in the *Critique of Pure Reason* four main doctrines, (a) of the transcendental unity of apperception, (b) of the forms of sensuous intuition and of the schematized categories, (c) of specific empirical laws, and (d) of the sensuous manifold. Kant attempted, he believes, to develop four parallel ethical doctrines. This attempt is examined with great thoroughness in four long chapters dealing, respectively, with the establishment of the supreme moral principle, its practical application, the moral end, and empirical moral data. The author's conclusions are entirely critical: the categorical imperative is, strictly interpreted, wholly empty; such content as its specific formulations contain are illegitimately derived from man's moral experience and not from pure reasons; and, in itself, the categorical imperative provides no guide to moral conduct. Kant's great achievement in the first *Critique* was the rational vali-

dation of man's sensuous experience. But in developing his ethical theory Kant unhappily reverted to a pre-critical reliance on pure reason wholly divorced from experience. The resultant failure was complete and inevitable.

The author then examines the moral doctrines of three eighteenth-century opponents of ethical rationalism, Herder, Hemsterhuis, and Jacobi. Their writings are analyzed with great care and the development of their ideas as well as the relationship of these ideas to those of Kant, Spinoza, Shaftesbury, and other noted thinkers of the period are clearly portrayed. The volume ends abruptly with no attempt at a constructive ethical synthesis.

The book as a whole is unusually interesting and valuable. It contains an enormous amount of classified information, yet the main thread of the argument is never lost in the mass of detail and quotation. The author's sympathy is strongly anti-rationalistic, but his treatment of Kant (and of the numerous neo-Kantians to whom he refers) is accurate, fair, and often very penetrating. Kant could be, and has been, more sympathetically interpreted, but his most valiant defenders must admit that he lays himself open to the author's criticisms. The evaluations of Herder, Hemsterhuis (who hardly merits a whole chapter), and Jacobi are more generous but less illuminating, for though the author relates their several doctrines to the *Sturm und Drang* romanticism, which they so clearly exemplify, he makes no attempt to develop, in his study of them, a systematic anti-rationalistic theory. The book is thus a record of two extreme positions neither of which is philosophically tenable as it stands. We shall look forward to the second volume, which will presumably attempt a more constructive synthesis.

T. M. G.

The Ideals of East and West. KENNETH SAUNDERS. New York: The Macmillan Company. Cambridge, England: At the University Press. 1934. xxiii + 248 pp. \$2.50.

The historian will no doubt be irritated by the generalizations in this book and the reader of only the Preface, Prologue, and Epilogue will get the impression that the author is preaching for the Brahmo-Samaj or some other universalistic faith. On the other hand, there is an attempt to define a single dominant ideal for each of the cultures discussed. "The ideal type . . . is still the sage teacher in China, the other-worldly saint in India, and the practical reformer in Japan. In the western world, which draws its ideals so largely from Greece and Palestine, there is a curious fusion, taking place of the ideal of the seeker after scientific truth and of the religious teacher" (p. xii).

Dr. Saunders is, however, too experienced in the traditions of both East and West to be content with such a thesis. He makes it quite clear in his artful historical surveys that India, Japan, China, Greece, Israel, and Christendom have each harbored a great variety of ideals, and his anthologies from the ethical teachings and maxims of these peoples makes this fact clear in a most entertaining manner. The fact that the ideals and heroes of one culture find their analogues in those of others raises the hope in Dr. Saunders that all peoples may soon recognize a universal ethics, which can be translated into many idioms. Others, however, may leave his book with the impression that the world is so full of a number of ideals that we all ought to be thankful no one applies any of them consistently.

H. W. S.

Kierkegaard. Konstruktion des Ästhetischen. THEODOR WIESEN-GRUND-ADORNO. (Beiträge zur Philosophie und ihrer Geschichte, 2.) Tübingen: J. C. B. Mohr (Paul Siebeck). 1933. vii + 165 pp. 9.60 M.

Though his style is heavy and peculiar, the author (formerly Privatdozent at Frankfurt) undertakes an exceptionally thoughtful attack upon Søren Kierkegaard, the founder of modern Existential philosophy. In contrast to Kierkegaard's view that the categories of existence are to be found in the inner insecurity of the individual, Wiesengrund tries to show that this retreat into subjective existence is an expression of the historical insecurity of certain elements in Western society. From this point of view he makes a penetrating interpretation of Kierkegaard's world of the imagination. Especially his interpretation of the "bourgeois interior" is a masterpiece. He shows that the flight toward subjectivity is really a flight into the prehistoric regions of myth whence there is no return to the objective world; that the paradox by which Kierkegaard tries to save himself is really a mythical sacrifice of his intellect; and that in the background of Kierkegaard's thought there remain the perspectives of German idealism, from which he never freed himself. Lastly he points out that the true significance of Kierkegaard is to be found where he himself did not seek it, namely, in the realm of esthetics and in the images he uses to portray it. The wealth of philosophical thought that the book takes for granted makes these lectures a difficult but rewarding task and an important contribution to the critique of Existential philosophy.

UNION THEOLOGICAL SEMINARY.

PAUL TILLICH.

La Religiosità dell'Arte e della Filosofia. ARMANDO CARLINI.
Firenze: G. C. Sanzoni. 1934. x + 231 pp.

Nationalism dies hard in philosophy, too. It is always a little surprising to a philosophical reader to find how fixed are the terms of current Italian discussion in philosophy, particularly in esthetics. The terms are fixed by Croce and Gentile still, which means in turn by Hegel. But Crocean esthetics especially is Hegel with a difference. The "principle of absolute transcendence," which our author here makes so much of, is a psychological principle. The absolute reveals itself in immediate intuition and the "pure esthetic act" is the necessity of the absolute revealed in a moment of spontaneity and freedom. Signor Carlini's work traverses familiar ground, though to a not altogether familiar purpose. It is not until page 57 that this purpose becomes reasonably clear:

"Given at the foundation of religion a teleological principle, absolutely transcendent (as is demanded by true religiosity, and given, on the other hand, as contemporary esthetics justly demands, the purely secular and human character of art, it does not follow, therefore, that there is no possible relation between art and religion. On the contrary it is found that in proportion as modern esthetics has individuated the principle of art in sensible form out of self-consciousness, accentuating at the same time the spirituality of such a principle, it has precisely thereby introduced the seeds of spirituality into self-consciousness." The art of artistic creation or preception is, for our author, the evidence and actualization of the transcendent.

As is the case with Croce himself, this abstract schematic analysis, borrowed from metaphysics in Germany and ultimately from Vico in Italy, is illuminated by many flashes of direct perception and by a finely sensitive reference to Italian art and poetry. But the special aim of the book is the marriage of religion and art in terms of intuition on the one hand and the Absolute on the other. It is not without significance that one of the longest essays in the book is on the problem of God in contemporary philosophy. Esthetics in the hands of Italian idealists tends to become a new and popular form of abstract theology.

I. E.

La sensation. Etude de la genèse et de son rôle dans la connaissance.
PIERRE SALZI. Paris: Félix Alcan. 1934. 198 pp. 25 francs.

M. Salzi in this study of "the genesis of sensation and its rôle in knowledge," attempts to solve the problem of induction: the possibility of extending its conclusions beyond the given. His explanation lies in a hypothesis, which will be recognized as not dis-

similar to one of some of the English Platonists, that sensations emanate from "consciousness" and the "intelligence." They are, in fact, "a more complete manifestation" of the intelligence than "the most abstract speculations."

To prove this hypothesis, M. Salzi adduces evidences of the effect of the imagination, anticipation, *gestalten*, and suggestion upon sensory data. Much of his material is derived from the therapeutic work of Dr. Bates, the ophthalmologist, in repairing defective vision through exercises in the use of the visual imagination. By asking his patients to imagine certain shapes which they found difficult, if not impossible, to perceive, and to project them upon a screen, this physician was able, it is maintained, to develop in them the power actually to perceive these shapes when the appropriate physical stimulus was present.

That any stimulus should be required, beyond desire, would seem strange if not inexplicable. That there should be any qualitative differences between the various kinds of sensation would also be difficult to explain, if M. Salzi did not have the theory of specific nervous energy to fall back upon. Readers can decide for themselves how firm a foundation this is.

On the whole this book will probably be judged as more ingenious than sound. Would it not also be true that by making both the subject-matter and the criterion of knowledge subjective, the problem of induction is as far from solution as before?

G. B.

OTHER NEW BOOKS AND JOURNALS

SOPHIA. Anno II, N. 3. Ricerche e studi sulla filosofia post-kantiana. K. Chr. F. Krause (Contin. e fine): *Antonio Banfi*. Riflessioni sulla fenomenologia di Hegel: *Annibale Pastore*. Caratteri e sviluppi della filosofia presocratica: *Rodolfo Mondolfo*. Nuova critica dell'utilitarismo (continua): *Giuseppe Rensi*. Samuel Clarke e il razionalismo inglese del secolo XVIII (continua): *Eugenio Garin*. Per una nuova interpretazione della storia dell'Hegelianesimo in Italia (Contin. e fine): *Siro Contri*. Note sull'universo di Marcel Proust: *Ugo Tolomei Pietrasanta*.

LOGOS. Anno XVII, Fasc. 3. Lo Stoicismo e l'esigenza odierna del Logos: *R. Fedi*. Il pensiero filosofico di Francesco Fiorentino nella storia della sua formazione: *D. Bosurgi*. L'idea dello Stato in Mirabeau: *E. Restivo*. Il concetto dell'io nell'empirismo inglese: *E. Garin*. Il problema della storia nell'idealismo moderno: *N. Petruzzellis*. Spirito e mondo della dialettica: *A. Liebert*.

Kallen, Horace M.: Education versus Indoctrination in the

Schools. (Public Policy Pamphlet No. 13.) Chicago: University of Chicago Press. 1934. 23 pp. 25c.

Kirkpatrick, Edwin A.: *Mental Hygiene for Effective Living*. New York: D. Appleton-Century Company. 1934. xiii + 387 pp.

Oldenberg, H.: *Le Bouddha. Sa vie, sa doctrine, sa communauté*. Traduit de l'allemand par A. Foucher. Quatrième édition française revue d'après la dernière édition allemande. Paris: Félix Alcan. 1934. 438 pp.

NOTES AND NEWS

We have received from Professor Jared S. Moore of Western Reserve University the following "Note on Empedocles":

Theophrastus tells us (*De Sens.* 7; *Diels' Doxographi* 500) that Empedocles applied his doctrine of "like perceives like" to the various senses as follows: light is perceived by the fire that is in the eye, dark by the water, hearing and smell by air; but as to the specific medium of taste and touch that Sicilian philosopher says nothing. Can it be possible that he really had no teaching on this subject, or may it not rather be the case that Theophrastus merely was ignorant of what he did say? The logical Empedoclean explanation of taste and touch would seem to be that they are perceived through earth, the remaining one of the four elements not employed in the other sensory processes. There are, for Empedocles, five senses—one of them, sight, being dual, and two of them, smell and hearing, having a common medium; and there are for him four elements in nature, of which three only are associated with the sensations referred to above. Taste and touch are contact senses: what more natural, on Empedoclean principles, than to connect them with the remaining element, earth? This is such an obvious supplementation and completion of what we know of that philosopher's sense-theory that it seems almost foolish to mention it, and yet perhaps it is worth while to record the suggestion.

A portrait of Borden Parker Bowne, presented by graduates and friends of Boston University, was unveiled at exercises held in the Robinson Chapel, Boston University School of Theology, on October 23, 1934. Professor Bowne occupied the chair of philosophy in Boston University from 1876 to 1910, and the presentation of the portrait was a tribute to his influence as teacher and writer. At the exercises, Dean William M. Warren, of the College of Liberal Arts, spoke on "Bowne as a Man." Professor Earl Marlatt, of the School of Education, read an original poem on Bowne. Professor

Edgar S. Brightman, of the department of philosophy in the Graduate School, spoke on "Bowne as a Philosopher," and Dean Albert C. Knudson, of the School of Theology, on "Bowne as a Theologian." The artist was Miss Mary Neal Richardson of Boston.

The Modern Thinker announces an essay contest on the subject: "Needed: A New American Philosophy of Life." The contest is open to all graduate and undergraduate students of American universities and colleges. There are no restrictions on the point of view taken. It is emphasized, however, that the judges are seeking original viewpoints. The length of the essays should be not less than 1000 nor more than 2000 words. All papers should be in the hands of Contest Editor, *The Modern Thinker*, 310 Riverside Drive, New York, N. Y., not later than midnight of December 31st, 1934. The awards, in the amounts of \$25.00, \$15.00 and \$10.00 respectively, will be made to the writers of the three outstanding essays. The winning essay will be published in *The Modern Thinker*.

Mattoon Monroe Curtis, Professor Emeritus of Philosophy at Western Reserve University, died in Cleveland September 19, 1934, at the age of seventy-six. He was a graduate of Hamilton College, and received his doctorate at the University of Leipzig. He occupied the chair of philosophy in Adelbert College of Western Reserve University from 1891 until his retirement in 1926.

Since we believe the readers of the JOURNAL would be interested in news of new appointments and changes of positions in the departments of philosophy of our colleges and universities, we suggest information of such changes be sent to us for publication in our Notes and News section.

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Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. Nos. 17 and 18. August 16 and 30, 1934.

A Bibliography of Philosophy for 1933.

Volume XXXI. No. 19. September 13, 1934.

The Material World. THEODORE T. LAFFERTY.

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Can the Law of Contradiction be Stated without Reference to Time?
MARTHA HURST.

Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 20. September 27, 1934.

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Volume XXXI. No. 22. October 25, 1934.

The Eighth International Congress of Philosophy. ERNEST NAGEL.

Formal and Material Thought. SAMUEL M. THOMPSON.

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Spinoza and Locke by Frederick J. E. Woodbridge and Sterling P. Lamprecht. (Two tercentenary addresses reprinted from the *Columbia University Quarterly*.) 29 pp. (paper cover) 40 cents.

The Book of Diogenes Laertius. Its Spirit and Its Method by Richard Hope. (Columbia University Press, 1930.) xiv + 241 pp. \$3.50.

Telesio, The First of the Moderns by Neil C. Van Deusen. 90 pp. (paper cover) 75 cents.

Montaigne's Philosophy of Human Nature by J. V. Mauzey. 98 pp. \$1.00.

English Space and Time Theories from Henry More to Bishop Berkeley by John Tull Baker. 90 pp. (paper cover) 75 cents.

The Growth of Bradley's Logic by Rudolph Kagey. 131 pp. (paper cover) 75 cents.

Responsibility. Its Development through Punishment and Reward by Laurence Sears. (Columbia University Press, 1932.) ix + 198 pp. \$2.50.

Value Theory and Criticism by Orlie Pell. 81 pp. 75 cents.

Realistic Ethics by Annette T. Rubinstein. 137 pp. \$1.50.

A Bibliography of Philosophy for 1933. 56 pp. \$1.00.

Aristotle's Theory of the Infinite by A. Edel. 102 pp. \$1.00.

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THE JOURNAL OF PHILOSOPHY

RETURN TO DUALISM

HAVE we in our detailed and even tortuous commentary on contemporary physical theories failed to see the large and simple revolution that has occurred in this science? Once again, after centuries, we conceive of a total universe, spatially closed; and contemporary astronomy, unlike the speculation of the Greeks, elaborates this conception in exact yet empirical formulae. Once again the word "universal" has a scientific, and not merely a logical meaning, certain propositions being universal in the sense that they describe an ontological whole. The epoch of thought inaugurated by Copernicus comes to an end, "passes into us another soul." The genuine seeker after universal truth will not complain because it is the physicist, and not the philosopher, who has discovered the absolute he has so long sought. Would there have been a Riemann or a Gauss without a Kant? Our business is surely a more general appreciation of this new conception of a physical absolute, and an adjustment to it of our other conceptions—of our larger non-physical conceptions on the one hand, on the other of our more limited physical concepts. This paper will discuss the relation of universal geometry to two large conceptions envisaging nature respectively as a pattern of species and as a hierarchy of forms. It will touch only incidentally upon its relation to less comprehensive physical concepts.

I

The conception of nature as a closed geometrical structure is not new. It was familiar and indeed basic to Greek thought. It was implicit in the Babel-towers and temples of the religions out of which our Western tradition arose; it grounded the hope of the astrologers who followed the course of dynastic destiny through the geometrical field of the heavens. Contemporary physics consummates an effort as old as our culture.

Retrospect upon the evolution of physical science shows physical analysis to have been consistently determined by this pursuit of a spatial or geometrical whole. Contemporary theory reaches a science of world-geometry only because past theory made this conception its objective. But thought also pursues wholes other than the spatial. It pursues, for example, the biological wholeness which

is health, and the temporal wholeness which is the objective of narrative and history. The path to a comprehension of nature under the form of a single geometrical structure has in consequence been anything^o but direct. Thought has been deflected by other conceptions, leading in other directions. One of these was the conception of a completed numerical order, easily confused with geometrical structure in an age which had not learned to distinguish numbers from the solids used in counting, and which exemplified geometrical ratios in measurements involving a recurrent and arbitrary unit. The voluminous and spatially patterned integers of the Pythagoreans present the most striking illustration known to us of this confusion. At the same time, by their study of the incommensurables, the Pythagoreans led the way to a clearer distinction of geometry from number.

But the identification of geometry and number was the least part of the Greek confusion. The space-filling integers were ordered by analogy with the species and genera of the living world, while these were arranged in a hierarchical pattern borrowed from the social order, and leading up to a supreme genus, the One. This triple confusion of geometry with number, of number with the specific pattern of life, of specific with caste relations—was systematized in the Hellenistic conception of the One, and so projected into medieval theology. It has continued to dominate speculation down to this day, when, its source forgotten, it springs up in the least expected places. It motivates, for example, that theory of types which would by fiat identify a logic abstracted from number-theory with the Aristotelian logic abstracted from plant and animal morphology. All systematic monism, and all pursuit after a single organon of thought, perpetuates the ancient confusion.

If we can clarify the confusion to-day, at least in part, we owe this not so much to philosophical acumen as to the progress of physical science, which has at last established the autonomy and integrity of geometrical analysis by a comprehensive theory of cosmic structure. We understand what belongs in a picture as the picture approaches completion. We must recognize too the pragmatic value of the past confusion, which encouraged the thinker to carry the one conception into fields initially occupied by the others, and in this way to universalize its scope. So the hybrid integers of the Pythagoreans led the way to algebra and analytic geometry; so the conception of a universal geometry, confused with a natural law controlling social destiny, led to the ideal of a universal polity; so the Greek atomism, a reduction of all the species of nature to a few geometrical solids, prepared for the chemistry and quantum theory of to-day; and so the hybrid notion of a *generation* of mathematical entities out of a

formula has stimulated theoretical construction.. But our appreciation of the instrumental value of these hybrid notions must not blind us to their essential unintelligibility. They represent stages on the way to a clear articulation of universal geometry, of the art of symbolism, of the actual interdependencies of living species in a universal process, and of the dynamics of human society. They are dreams, not science.

But if we are to distinguish from each other these hitherto confused objectives of our speculation, what is to be their differentia? What, for example, differentiates the geometrical conception which we now see to be the motivation of physical analysis? Shall we say its use of measurement, its exactitude? Every science seeks to be exact, and will measure where it can. The use of statistics does not make economics physics. Shall we say that physics articulates spatial pattern? This is truer, but still indefinite, for every pattern is manifest in space. We have long ago forgotten the original goal of physical speculation, the objective which provided its motivating power. Physics arose as a pursuit of the eternal. For the Greek mind space was the container, as for the modern mind it has been the medium. But the container of what? The medium for what? The container of change, the medium for motion. Space has always meant our apprehension of nature in abstraction from its change; and while it has been popularly confused with the void, space has always supplied the scientist with effectual distance factors. The first great physicists were priests and statesmen, in search of an enduring social structure; but in their pursuit of the eternal and immutable, they appealed to a nature wider than society, to the great universe of heaven and earth; and there, and not in the world of life, the goal has been attained. Our universal geometry is the universe known in its eternal structure. Modern physics no longer abstracts so roughly from time as did the Greek; it symbolizes time in its formulae. But the time thus symbolized is not historical time; historical time is change of form, while the natural structure symbolized in physical formulae is changeless. Physical science is our perspective upon the eternal.

It may be objected that universal geometry is but part of physical theory. This is true. Physics also engages nature as a movement of discrete entities, and the theory of the quantum witnesses to the ineradicable character of natural discreteness. But atomism and whole-ism, discreteness and continuity, are complementary and not alternative conceptions; and in our analysis of nature it is always the concept of continuity which is primary and which goes ahead, the other concept accommodating itself to this progress. Our investigation, as it moves by a mysterious prescience towards struc-

tures larger than the configurations of our casual perception, must ever turn in its tracks to undertake an analysis of casual experience into units smaller than those of sense, but commensurate with theory. Atomism has never been more than a device accommodating perception to geometrical thought. Thus reconstruction moves towards the macroscopic and the microscopic at the same rate; and it is no accident, but an implication of physical method itself, that speculation should simultaneously advance the two theories of universal geometry and the quantum. The quantum theory permits the application of mathematical physics at a point. As ultimates of physical analysis, clearly discernible in themselves though not in their interrelation, the quantum and the geometrical cosmos are ontologically real and objective. To repudiate these metaphysical ultimates is to invalidate all intellectual analysis whatsoever. In them, physical knowledge reveals itself to be no merely empirical generalization, but literally universal and absolute in its grasp of ultimate form. For the first time in human history, realism is fact and not just faith.

The cosmic geometry is fixed, the quantum moves. To know in detail how a moving reality maintains its fixed structure would be to know all. But some understanding of this relation is provided by the body of physical knowledge, and physicists will henceforth apply themselves to its clearer exposition, by showing the ingreience of quanta and of cosmic structure in this or that historical situation. Our business as philosophers is to recognize that physics has touched ceiling and floor of the cosmic room, two absolutes immune to change. We must not deny this achievement on the ground of the abstract character of physics. Physics abstracts from the historic evolution of nature; but it is not necessary, in order to lay emphasis upon the dynamic nature of reality, to deny its eternity of structure.

Nor may we confuse these absolutes with the many instrumental concepts—atom, magnetic field, entropy, etc.—which link them to the forms of our casual perception. These other entities may be real or fictitious, in no case are they part of nature's eternal structure. Finally, we should renounce forever the disingenuous sophistry that pretends to reduce these physical absolutes to psychical, neutral, transcendental or other non-physical entities. Let us emphasize the truth and ultimacy of physical knowledge; and then, with an open and ingenuous mind, we can turn our attention to the aspect of nature from which physics abstracts—namely, to its specific or historic character!

II

A good many trails, independently initiated, have merged together to form the broad route which physics now travels; but not

all the trails of human thought merge in this one. Others proceed in other directions, and it is the business of the philosopher who is not a physicist to discern some community of direction among these. Our retrospect upon past thought presents to us, over and above the progress towards contemporary physics, movements leading towards the subsumption of nature under the conceptions of specific pattern and of hierarchical structure.

Neither of these conceptions, however, has succeeded in disentangling itself either from the other or from geometrical structure. Our study of the interrelationship of the living species, for example, is still largely a study of their spatial morphology. Plato, while confusing the three conceptions, held them in firm balance; but Aristotle's subordination of mathematics to a hierarchy of genera and species dominated subsequent thought until the Renaissance. The greatness of Descartes lay in his clear discernment of geometrical structure, or extension, as at once autonomous and abstract. Physics has profited highly by his distinction, but few philosophers have appreciated his insight. Philosophy set itself instead, more deliberately now, to the reduction of physical to biological or moral categories. Note some of the perversions under which the specific forms and social hierarchies thrown out of geometrical physics by Descartes have been restored by his successors! Here belong the anomalous modes of Spinoza; the pre-established harmony of Leibniz; Locke's inaccessible substances, specific natures these, lurking behind the geometrical transparency of matter; the qualitative sensationalism of Malebranche and Berkeley, and Hume's psychological mathematics; Kant's hierarchy of will, thought and perception, subjectifying all knowledge; idealistic logic, cleaving to the syllogism; the protean positivism now with us, subordinating systematic knowledge always to the more specific entities of our animal perception; and finally our pseudo-realisms, with their scholastic essences multiplied a million-fold now that no Occam stands by with his razor. Have we still to learn, after a century of lip-service to evolution, that specific form is mutable and historic, and that we reach the timeless formulæ of physics by express abstraction from the flux? And shall we never know that the syntax of a science, call it logic or what you will, is never more but always less than the natural knowledge it is culled from?

How this long-sustained and perverse endeavor to re-establish in geometry the specific forms of nature has exhausted modern thought, perhaps to incapacitate it forever! Discouraging us by its felt perversity, sophisticating us by the necessity of disguising its failure, it has discredited us with the thinking world, which has sensed the bigotry of the effort without discerning its error or appre-

ciating its motive. But most disastrous has been its effect in blinding us to the specific forms themselves, in their own right and in their dynamic significance. Shall we ever know again that nature lives, that species, though mutable, are real? Yet what fact is more universal or better attested, than that nature comes in types or species, functionally and therefore intelligibly interdependent? It was necessary, doubtless, to turn aside from the specific historicity of nature in order to concentrate upon its eternal structure; but now that we have finished the entrée, we ought to be allowed dessert.

We do give some grudging biological acknowledgment to the specific forms of the plant and animal worlds; but the dependence of *physical* analysis upon initial qualitative description, as well as the ever more apparent continuity of animate and inanimate matter, are proof that specific pattern is universal, and limited only by nature itself. Matter and life are indeed abstractions from nature, not provinces within it. How strangely we have ignored the obvious causal relations in this dimension of life! Instead of investigating the functional interdependencies among specific forms, we have protracted a primitive taxonomy based upon spatial similarities. To make up for this real absence of functional analysis, the genera were formerly supposed to determine the existence and characteristic form of the species. Now that we recognize genera to be only names symbolizing phylogenetic (or historical and not present) relationship, we proceed to throw out the baby with the bath by supposing that species too to be unreal. On the contrary a species in a real unit, a natural group, integrated by a specific reproduction-mechanism and conserved by definite symbiotic dependencies upon other natural species. If taxonomy sometimes despairs at defining a species, that is because it uses a superficial morphological analysis in place of a functional description.

We are troubled to-day, of course, by the practical realization of Descartes' injunction to follow the course of physical structure even into the interior of the living organism. Obsessed with the ubiquity of physical structure, what we have to appreciate is the ubiquity of living or specific pattern, which reached down into inorganic matter even as physical structure reaches up into the organic. Man was encouraged to carry geometrical analysis from a few terrestrial solids into a universal science by regular movements of the immutable heavens; and in the same way our sense of nature as universal drama must carry us from the nearer drama of terrestrial evolution to the specificity which rides the skies.

Is such a science fantastic? Once we set about it, we shall find that physics itself has prepared the way. For physics, in its pursuit of a world devoid of specific form, has everywhere of necessity

taken account of the local and quasi-specific characters from which it then abstracts. Knowledge of physical structure is reached by way of recurrent and typical organizations of matter and energy; and in its passage from particular situations to universal structure, physics moves by way of pseudo-species like the atom and the molecule, the square and the circle, which involve and illuminate a genuine specific pattern still unknown. While such specific quality is only local accident for physics, it is accident admittedly ubiquitous in nature and essential to its process. So physics provides a mass of incoherent description resolved on the one hand into physical theory, but pointing on the other to a knowledge of specific pattern. Physical theory makes clear to us what is not physical in nature. To know, for example, how the specificities we call life differ from those we call inanimate, we should know the bed-rock of physical texture common to both. In its presentation of the unchanging geometrical warp of nature, physics allows us to follow the moving tapestry of specific form which weaves through that warp, and to delineate which is the aim of an enlightened and rehabilitated biology.

Thus the atomic and molecular configurations of chemistry, although themselves hybrid entities arising from quantitative analysis and incomparable with the familiar and genuine species of nature, are instrumental to a study of the crystals, which in their retention of character through variation of size may constitute genuine natural species. The extent of crystalline form is seldom appreciated. Not only do most minerals gravitate toward it, but it is present as intermolecular stress in all liquids. If rivers and seas are crystalline, it is tempting to ascribe this character to the atmosphere, and even to the vast spaces where energy is most tenuously distributed. And a crystalline world is a specifically patterned world, in which gravitation itself may be our most summary recognition of a universal interdependence of species. Chemistry aids us further in its study of the colloids, familiar in natural slimes and in protoplasm, significantly exclusive of crystalline form, and bridging the gap between inorganic and animate nature.

In the organic realm itself, the concept of an interdependence of species bids fair to remove the present antinomies and to establish an intelligible methodology, by showing us that we mean by "organic" nothing else than that relative stability of specific form notable throughout nature. The method will be that of ecology, but of an ecology which will ultimately include also the species of the "inanimate" environment in its reconstruction of the larger organizations of life. There is no clash where ecology, physiology, cytology and bio-chemistry all study in the large or in the small the configurations of a host of species of which the "organism" manifests one.

In the human world, finally, a study of specific form removes the ancient myth, still the foundation of our psychology and sociology, of a fixed human species, encourages the description of distinctive cultural units and their interference, and provides a basis for the scientific reconstruction of history. It will further remove our philosophical antinomies, by leading to the delineation of effective fields larger than that of human society and effectively determining the course of cultural evolution. So we shall be led up to a metaphysic proper to our age, one which no longer denies form and reality to the mutable but which recognizes the dimension of time in the historical evolution of specific pattern, while pointing to eternal structure as the other of the two equally intelligible objectives of our science of nature. This is to return to a dualism not of substance, not of parallel aspects, but of factors or dimensions—of time and space, historicity and eternity, woof and warp, specific pattern and physical structure. So we fulfill the prophecy of the *Timæus*, that profound parable which since the Dark Ages has shaped the course of Western thought, to realize itself to-day in literal truth.

III

What of the third great conception that has dominated our tradition, that of a natural hierarchy? We noticed that this conception, suggested by a primitive feudal society, was mistakenly extrapolated into an interpretation of the animal and vegetable world. As feudalism has ceased to be the definite form of our society, we have come to see that genera exert no causal influence on the species they include. Yet the hierarchial conception, to be so long effective, must have engaged some real and objective order. We can recognize in it, I believe, a foreshortened and superficial perspective upon the evolution of specific patterns. Telescope the evolution of species upon a timeless plane, and you have the hierarchy, the earlier and more generic forms seeming to inform the later. In truth, the determinants of a specific form lie in the many species which even now interact with it, and in no sense in its ancestral lineage.

The ultimate process of nature is a symbiosis, participated in by inorganic as well as organic species, and not a simple imposition of form. The animal form is largely determined by that of its vegetable or animal prey, and varies with the latter. The way in which human culture has been moulded by the plants and animals man has had commerce with, and literally worshipped, is perhaps the most fascinating chapter of anthropology. Plants have just as strikingly responded to their animal hosts, producing edible fruits and clinging burrs.

But priests and statesmen were our first philosophers, and they

prosecuted science in what was, according to their lights, the social interest. As officers of a dominant cult, unconsciously exaggerating their regulative function, they ignored the alien characters upon which their cult was to be imposed. The plebs was, for them matter, and they could not know to what an extent the plebian ethos was to dominate the social evolution. We know better, let us hope, the conspiracy of government with governed that is law.

In theory and in practice the hierarchical misconception has worked havoc, and should be made anathema. In practice it makes the course of social evolution a violent and bloody passage. In theory it issues in a sterile transcendentalism that is wholly self-defeating; for if we follow the hierarchy downwards, we land in an ineffable formlessness which must nevertheless be appealed to as the effectual principle of dispersion and analysis; while if we follow it upwards we reach a similar vacuity at the top. The notion of levels of complexity and organization, so popular to-day, perpetuates the old confusion of specific and physical analysis. The real complexity of any specific form can be shown only in the dynamic interrelations of many species, and is quite irrelevant to the physical complexity of the individual members. Does the complexity of a machine measure its function? The permanent value of the hierarchical conception lay in its insight into a unidirectional character of nature, and this is conserved in the conception of an evolving pattern of natural specificity.

Since Kant, even since Leibniz and Locke, Western thought has struggled to give expression to this historical and evolutionary dimension, only to be baffled by its inability to distinguish nature's historical character from an eternal physical structure. Epistemology is one form of this confusion—we abstract our intellectual systems from the specific historical context in which alone they are intelligible, and ask their relation to physical structure. There is no simple answer to this question, since the specific and physical dimensions of nature are incommensurable, and manifest their relation only in the infinite story of creation. Bergson has approached this conclusion, only to turn back finally to a monism which invalidates physical knowledge, even while it prohibits any analysis of the specific and non-physical pattern of nature. Instead of neither, we can have both sorts of knowledge, if we will recognize the essential duality of nature. Physics needs this validation, for its theorists are wavering in their realism; while biology and sociology are in crying need of a guidance which can be provided only by a theoretical acceptance of the larger agencies and forms of an historic evolution. In practice too we need the stimulation of this revelation of the necessity we are under of keeping step with a nature that is marching on.

In its failure to make metaphysical acknowledgment of the historical passage of nature, modern thought has only reflected a more general immaturity. In its predilection for the eternal and static our science is still Greek. Yet our culture is not Greek.

Its shibboleth is progress, its religion is creation; and this religious vision of nature as the drama of a universal life will yet be made articulate in scientific reconstruction. That science will be a discourse on the specificity of nature, in distinction from its immutable geometrical form.

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ORGANIC PSYCHOLOGY. I. THE SCIENTIFIC NATURE OF PSYCHOLOGY¹

THE most insistent theoretical questions of present-day psychology seem to be those which have grown up naturally as a result of the associations between psychology and several more or less closely related sciences. There is some confusion on the definition of psychology, but practically all of the processes we study are similar to the concept, for example, of a "walk" when this word is used as a noun. The topics studied in psychology are always activities or functions of the living organism, and the only adjective which can distinguish the present psychology from other kinds is "organic." The term "organismic" has the misfortune of being associated with C. M. Child's partiality for the protoplasms of the lower animal forms and with the Gestalt psychologists' emphasis on the limited field of conscious perceptual processes at the expense of other more important activities of the psychological organism. The present writer's psychology then may, if desired, be referred to as "organic psychology," and we would not object to "psychology" alone if the concept of "organic" were always understood. This paper is concerned with those general scientific questions which are frequently raised in psychology.

DIFFERENT SCIENTIFIC LEVELS AND THE RELATION OF PSYCHOLOGY TO OTHER SCIENCES

Knowledge of natural phenomena is arbitrarily divided into scientific fields which can not be sharply separated from each other, and there is a somewhat distressing tendency for each science to

¹ Part II on "The Psychological Organism" has appeared in the *Psychological Review*, Vol. 41 (1934), pp. 356-367; and Part III on "The Methods and Subject-Matter of Psychology" has been published in the *Journal of General Psychology*, Vol. 11 (1934), pp. 187-193.

define its subject-matter so broadly that it includes some of the subject-matter of other sciences. Good scientists maintain an interest in several closely related fields, but this does not place an undue strain upon them because what they consider their own field almost always includes a large portion of the subject-matter of other sciences. In describing some of the scientific levels and the position of psychology among them, the following scientific levels will be found convenient for our present purposes: social sciences, psychology, physiology, anatomy, cytology, chemistry, and physics. These scientific levels will be taken up in the reverse order.

Physics and Chemistry.—Physics is the study of nature in so far as it can be reduced by calculation and experiment to a few simple laws, and it treats of the phenomena associated with matter. Chemistry is concerned with the composition of bodies and the changes of composition they undergo, and it deals with the constitution of matter considered as composed of ultimate integral particles such as electrons, atoms, and molecules. Several subjects are studied by both physics and chemistry, and no sharp line of demarcation can be drawn between the two sciences. The concept of matter has undergone a radical change in recent years, and more emphasis is now placed on other concepts such as energy. The physical scientists have reached the conclusion that the appearance of "objects" is for the most part an illusion.

Mechanical analogies are sometimes used in psychology, but mechanics is a part of physics and is removed a considerable distance from the psychological level.

Cytology.—Cytology, anatomy, and physiology are included in biology, and biology is often too broadly defined as the science of life and living things. Cytology treats of the structural details and functions of cells, and closely related to cytology is histology, which studies the structure of tissues and their arrangement in organs. Some attention may be paid to development and function in the histological study of an organ.

In psychology it is customary to consider the primary reproductive cells, and the minute structure and functions of sense organs, nerves, muscles, and glands. The scientific study of an organ and its function often leads to an investigation of the minute structure of the tissues of which the organ is composed.

Anatomy.—Anatomy is the science of the structure of the organs and bodies of living things, and gross anatomy is concerned with the form and composition of the larger organs of the body. There are large differences between different people in both gross and fine anatomy, and the differences between the two sexes and between people of different ages are also important in psychology. The

anatomy of different animals such as protozoa; worms, insects, fishes, birds, monkeys, and men goes far toward explaining the differences in behavior, and in the same animal such as, for example, the rat, a knowledge of the structure of the different parts throws some light on the functioning of the different parts. In animal psychology, child psychology, and abnormal psychology, much attention is paid to the structures that are involved in various activities, and proper scientific ideals require that in the study of every psychological function some account be taken, if possible, of the form and nature of the structures that are functioning.

Physiology.—Physiology studies some of the functions of organic beings, and psychology studies other functions. Physiology may be distinguished from anatomy, which treats of structures, and from pathology, which treats of the modifications of functions and changes in structure which are caused by disease. The relation between anatomy, on the one hand, and physiology and psychology, on the other, is the close relation between structure and function. Structures and functions are closely related to each other, but they are still different from each other. Structures influence functions, but many physiological and psychological functions also influence the form and composition of the structures.

Differences Between Psychology and Physiology.—Physiology is more closely related to chemistry than is psychology, and physiology is principally concerned with the vital or maintenance functions of the organism. The connection between physiology and medicine is fairly close. Physiological activities are frequently involved in the adaptations and maladaptations to the so-called biological environment, and psychological activities are frequently involved in adjustments and maladjustments to the cultural environment.

The methods used in physiology and psychology are practically the same, and the most important differences are in subject-matter. The most satisfactory way perhaps to distinguish between the two sciences is to list the topics which are stressed in the two fields. Physiology places greater emphasis than psychology upon nerve-muscle preparations, digestion and secretion, the cardiovascular system, the respiratory system, reproduction, and heat production and regulation. Psychology places greater emphasis than physiology upon externally observable behavior, learning and retention, verbal activities, habits, motor skills, attention, perception, thinking, imagination, affectivities, native drives, intelligence, personality, esthetic activities, and dreams. There is some overlapping, which is very much to the mutual advantage of the two sciences, in sensory, nervous, muscular, and glandular functions; reflex action; tissue needs and native drives; and work, fatigue, rest, and sleep.

The scientific nature of physiology is increased by its close relation to anatomy and chemistry, and the scientific nature of psychology is increased by its close relation to anatomy and physiology; but psychology and physiology still differ from anatomy and chemistry in several respects. Some further differences between psychology and the biological sciences may be brought out in connection with the differences between men and subhuman animals.

Differences between Men and Subhuman Animals.—Men and subhuman animals differ from each other in the chemical systems of their bodies, and in cytology, anatomy, physiology, and psychology; but the lower animals also differ from each other in a most unusual fashion. Heredity and many other biological factors are relatively more important in subhuman animals. The differences between men and subhuman animals are much greater at the higher scientific levels, and they are also much greater in the more complicated psychological processes.

There is a special interest in the comparison between men and the higher apes because although men and apes are equipped with nervous systems that are similar in several respects the psychological differences between the two are large. It is difficult to compare the intelligence of men and apes because the qualitative and quantitative differences are so great, but judging by the quantitative data that are available on human children it would seem that the difference between the intelligence of the average three-year-old child and that of the mature ape is greater than the difference between the intelligence of the mature ape and no intelligence at all. Man's superiority in speaking and thinking can not be passed over lightly. Pre-school children form verbal associations with tens of thousands of objects and events; and judging by the number of verbal and other concepts that are commonly discovered the difference between the average adult man and the smartest ape that has so far been investigated is many times as great as the difference between the genius ape and a zero quantity.

People are thinking about something or other practically all of the time, and although they may not always be thinking about important subjects, they are still thinking. They write down their thoughts for future use, think about the future as well as the past, and on some occasions display a degree of foresight and purpose that is surprising. In the ability to solve problems and to reason, the difference between man and ape is great indeed.

We have mentioned the ape because he is the highest of the lower animals, but the differences between the personalities of man, on the one hand, and the rat or the amblystoma, on the other, are considerable.

One of the greatest differences between men and subhuman animals is in verbal and other complicated forms of learning. Man can learn verbal material that is out of the question with animals. He can learn many different kinds of elaborate motor performances, such as typewriting and playing musical instruments, and he acquires a large number of interests, desires, aversions, attitudes, beliefs, convictions, and prejudices not found among the brutes.

All kinds of conscious activities seem relatively more important in human nature. People have a larger number and greater variety of feelings, emotions, moods, and sentiments; and man almost seems to be set apart from the animals by his esthetic organization, unconscious dispositions, humor, and dreams of both the waking and sleeping varieties.

Another interesting difference between men and animals is in the matter of psychological abnormalities. Lower animals do not have human delusions, obsessions, and depressions; and the animals seldom show any of the usual symptoms of the functional neuroses and psychoses. The principal differences between men and animals seem to be those which are related to learning and retention, language organization, and creative imagination.

The Social Sciences.—Having described the general nature of psychology, it now only remains to consider the highest of the scientific levels, that of the social sciences. The most interesting feature of the social sciences is that they are principally concerned with human nature rather than with the nature of subhuman animals. Such subjects as philosophy, economics, sociology, religion, education, political science, history, language and literature, and art and esthetics are placed above psychology, but these subjects have some close connections with the biological and physical sciences. Psychology is regarded as more scientific than the social sciences, but there are no more important subjects than those studied by the social sciences. The relation between psychology and physiology appears closer than that between any one of the social sciences and any one of the biological sciences, but, while this is a scientific advantage for psychology, the students of psychology and the social sciences are generally aware that being scientific and being important are not synonymous.

RELATIONS BETWEEN DIFFERENT SCIENTIFIC LEVELS

The Human Tendencies of the Scientists.—It might be supposed that men of science would hold accurate views in regard to their own and other sciences, but it is almost the rule for each scientist to overestimate the importance of his field, and the great majority of lower-level scientists take a particularly pessimistic attitude toward the

higher levels. Being scientific does not mean that one will not be subject to ordinary human weaknesses. The scientist's thinking about his own and other fields is sometimes motivated by feelings, desires, and wish-fulfilling processes.

There is a tendency for each scientist to define the subject-matter of his science so that it includes too much material. The physical scientists claim they study matter and energy, but they do not study all manifestations of matter and energy; and as physical scientists they know practically nothing about biology, psychology, and the social sciences. Biologists claim they study life and living things, but they do not study all or necessarily the most important activities of living organisms; and as biologists they know next to nothing about psychology and the social sciences. Psychologists are said to study some of the activities of living organisms, but they do not study all organic processes of men and animals; and as psychologists they know almost nothing about the social sciences. Psychology also may not be regarded as the only study of mental activities, because some mental activities belong in esthetics, logic, and ethics.

Each Science Is Limited in Its Application to the Higher Levels.—Each scientific level has limitations which should be recognized, because the application to and prediction of processes and phenomena in the higher levels are quite precarious. No one would expect a social worker to carry on his work in strict accordance with chemical principles, and no one would ask a biologist as such for his opinion on the principles of learning. Psychology is also quite limited in its application to the social sciences, and a psychologist as such knows nothing, for example, about the history of marriage or the economic condition of the world. The social scientist is better qualified than the psychologist to judge the value of psychology in his social science, and a psychologist is probably also better qualified than a physiologist to judge the value of physiology in psychology.

The "More Than" and "Nothing But" Hypotheses.—Activities are studied at each scientific level that are more than the activities studied in any one, or all, of the lower level sciences, but the activities at each level involve in one way or another all of the activities in the lower levels. The "more than" hypothesis, as applied to adjacent scientific levels, is as follows. Chemistry involves but is more than physics, cytology involves but is more than chemistry, anatomy involves but is more than cytology, physiology involves but is more than anatomy, psychology involves but is more than physiology, and the social sciences involve but are more than psychology. The books on physics do not say anything about anatomy and the books on anatomy do not say anything about psychology largely because there is nothing for them to say.

According to this "more than" hypothesis, there is no social science which can be reduced to psychology, psychology can not be reduced to physiology, physiology can not be reduced to anatomy, anatomy can not be reduced to cytology, etc. Psychology can not be reduced to any one or all of the biological and physical sciences, and biology can not be reduced to any one or all of the physical sciences.

The "nothing but" hypothesis holds that the processes studied at one scientific level are "nothing but" those studied at some one or several of the lower levels. The social sciences are nothing but the psychological, biological, and physical sciences; psychology is nothing but biology, chemistry, and physics; biology is nothing but chemistry and physics; chemistry is nothing but physics; and physics is nothing but a set of mathematical equations. According to this reasoning, all kinds of natural phenomena would be reduced to a set of mathematical equations. But the reasoning is a forlorn hope, and the general conclusion is unjustified.

The suggestion is sometimes made that studies at some one of the higher scientific levels should be discouraged until more conclusive data are available at the lower levels, but this suggestion has practical disadvantages. There is no more reason for refusing to study an organ because its chemistry is not completely understood than there is for refusing to study chemistry because chemical affinity is not understood, or for refusing to study physics because energy, electricity, etc., are not completely understood. The biologists would have to wait too long if they waited for the last word to be said in physical science, for the last word may never be said. The psychologists would have to wait too long if they waited until biology was finished, because it may never be finished. And in the meantime the proposition should not only be admitted, but it should be urged and defended by all persons everywhere that each scientific level has a justification and respectability of its own. It is particularly important to accept this proposition as far as the higher scientific levels are concerned because there are some reasons for believing that scientific studies are more profitably carried out at the higher scientific levels than at any one of the lower levels.

It Is Undesirable to Stress the Importance of Any One Level at the Expense of Other Levels.—In various discussions of the relative importance of different scientific levels, the biologists have been particularly energetic in defending their special group of sciences. They have claimed in no uncertain terms that the biological sciences are both justified and respectable. Hear, for example, the strong words of Professor Jennings, who, besides speaking for biology, is supporting the experimental method and defending one of the current

forms of the doctrine of emergent evolution. "The doctrine of emergent evolution makes the biologist loyal to experimentation and observation in his own field of work, whatever is found in other fields. Courage and defiance sprout in his soul in place of timorous subservience to the inorganic. No longer can the biologist be bullied into suppressing observed results because they are not discovered nor expected from work on the non-living parts of nature. No longer will he feel a sense of criminality in speaking of relations that are obvious in the living, for the reason that they are not seen in the non-living. Biology becomes a science in its own right—not through rejection of the experimental method but through undeviating allegiance to it. The doctrine of emergent evolution is the Declaration of Independence for biological science" (*Science*, 1927, 65, pp. 21–22).

The doctrine of emergent evolution is similar in several respects to the present treatment of the scientific levels and the relations between them, but our description of these levels would not make an anatomist or a physiologist any more loyal to his scientific level than it would make a chemist, a psychologist, or a social scientist loyal to his. Our treatment would produce no more courage and defiance in the soul of a zoologist than it would in the soul of a physician or philosopher. The biologist need not feel a sense of criminality in speaking of phenomena that are not included in the physical sciences, but a psychologist also need not feel a sense of criminality in speaking of phenomena that are not included in physiology, anatomy, and cytology. It seems that Professor Jennings should not have stopped at the level of the biological sciences, because there is no more reason for calling special attention to any one of the biological sciences than to any one of the physical, psychological, and social sciences. There is, in other words, nothing sacrosanct about the subject-matter of the biological sciences. Experimental studies should be encouraged in the biological sciences, but such studies should also be and are also being encouraged and carried out at the psychological and social levels.

A SYSTEMATIC PSYCHOLOGICAL POSITION

Psychology Is Not One of the Biological Sciences.—We do not regard psychology as one of the biological sciences because the point of view and interests of psychology are quite different from biology, that is, different from botany, bacteriology, cytology, histology, anatomy, physiology, zoology, and ecology. Several biological sciences are intimately associated with medicine, and botany is closely related to agriculture.

It is common for those who teach biology in the universities to

emphasize the concepts of evolution, heredity, growth, purpose, and adaptation to the environment, but these concepts have only a limited value for psychology. Some of these concepts would be of greater value for psychology were it not for the large differences between human nature, on the one hand, and the nature of plants and subhuman animals, on the other. Psychologists have not been greatly concerned over evolution since the discussions of G. Stanley Hall's theory of recapitulation died down a generation ago. The psychologists' attitudes toward heredity and instincts have changed in recent years. The concepts of "growth" and "development," which are unfortunately still current, suggest that the successive life stages of an individual are in large measure the result of the hereditary factors which were present at conception, and those who use these terms freely and loosely underestimate the importance of the strictly psychological and social factors.

The suggestion that psychology is the study of the adaptation of animals to their environments suffers from serious limitations and is the cause of much confusion in psychology. The biological concept of adaptation suggests a wild and somewhat standardized creature alone in the woods and struggling for his bare life against the force of nature. In the case of man, however, it seems clear that both the creature and the "environment" are very different from this primitive life-and-death picture. Man has changed his own nature, and what is called human nature is not the same as the nature of prehistoric man. Man has produced and manufactured a large portion of his own environment, and the outstanding factor in his adaptation to the environment has been his spoken and written language. The practical sciences of engineering and medicine have played a more important rôle than the pure science of biology in making possible the present civilization, such as it is.

People are not trying to "adapt" themselves to the environment all of the time, and many psychological activities are present while this much-talked-of attempt at adaptation is not present at all. Psychological activities may be adaptive, non-adaptive, or maladaptive. Certain features of chronic alcoholism, insomnia, hysteria, and some of the psychoses, although for the most part maladaptive, are still very properly included in the psychological field. The assumption that each structure and function of the body exists for an intelligent purpose is reading more into the situations than is justified by the facts themselves. The concepts of purpose and an upward striving toward perfection are least plausible at the psychological and social levels, because here the subject-matter under consideration is "out of the woods" and the phenomena in question can be more readily observed and the causal relationships more clearly understood.

Emergent Evolution.—The above treatment of several scientific levels and the relations between them does not harmonize in all respects with the most common form of the doctrine of emergent evolution. The principal difference perhaps is that our treatment is based on the characteristics of the subject-matter of the several sciences as the sciences now exist, and our discussion is not intended as a cosmic theory. We have not postulated the existence of a consciousness, mind, group mind, entelechy, *élan vital*, or an upward striving toward perfection. Psychology studies many activities that are ugly and displeasing as well as others that are attractive and pleasing. We study maladjustments and maladaptations as well as adjustments and adaptations. There is a psychology of idiots as well as one of normal people.

The relative positions of several sciences have shifted radically in the past, and scientific levels can not be regarded as in any way fixed at the present time. Physics became a separate science after chemistry, astronomy, and geology; but at present physics belongs to a lower level than any one of the three other sciences. Psychology was once regarded as one of the mental sciences, but this classification is no longer satisfactory. The methods and subject-matter of the different sciences are not determined solely by theoretical speculations. The sciences for the most part go where they are taken by the scientists.

As further data are obtained about psychology and the social sciences, more and more of the subject-matter of the social sciences is included in psychology. Collecting additional facts on psychology and physiology causes psychology to become more physiological; and increasing the known facts about biology and the physical sciences produces a settling toward the levels of the physical sciences. With every great discovery some of the subject-matter of one science drops into the lap of the science just below. Although there is much to be said in favor of the "more than" hypothesis and against the "nothing but" hypothesis, the extent to which the knowledge of one science is of value at the higher levels differs greatly with different pairs of adjacent sciences. When two sciences are closely related to each other in both subject-matter and method, there may be considerable traffic across the border in both directions, but an especially heavy traffic from the lower- to the higher-level science.

The Alleged Relation between the Body and the Mind.—When the word "body" is used in connection with this question, there is often considerable confusion in regard to whether or not the bodily features in question are physical, chemical, cytological, anatomical, physiological, psychological, or a combination of some or all of these. There are large age, sex, and racial differences between dif-

ferent bodies, and the structure of all bodies is constantly changing. Many students of philosophy and psychology do not know what is meant by the word "mind" when it is used in any connection; and there is some difficulty in understanding how there can be any constant and definite relation between a changing object and an indefinite concept, or any relation between something and nothing.

The "body and mind" expression suggests that there are only two kinds of worlds, and the assertion is often made that one is forced to take a position on the relation between these two worlds. But there are more than two kinds of worlds, and one does not have to take a position on the relation between the always changing body and the hypothetical mind. Each of the scientific levels which we have described includes phenomena and activities which are different from those included in each of the other levels; and the interrelations between the scientific levels are important. Psychology is no longer concerned with the special problem of the relation between the body and the mind; and in the place of this problem we now have the much more significant questions of the interrelations between reflex action; sensations; perceptions; nervous and muscular functions; verbal activities; the affectivities; and conscious, non-conscious, and unconscious activities.

Mechanism and Determinism.—Mechanics is a branch of physics, and the claim that psychological processes are machinelike in nature involves the assumption that the levels of physics and psychology are quite close together, when actually they are quite far apart. The characteristics of animals and machines are different, and there is no psychological process which closely resembles any ordinary machine. It is not difficult to be in error on this question, but mechanistic psychology would seem to be similar to such subjects as anatomical economics and chemical religion. Psychological activities are more physiological and organic than chemical, physical and mechanical.

Psychological determinism, on the other hand, merely assumes that psychological activities are determined by cause and effect relationships and that all psychological processes are themselves causal factors in the chains and patterns of causal events. The doctrine of psychological determinism holds that all psychological activities depend upon conditions, and that all psychological activities are in turn the conditions of other processes. In the science of psychology we think it is of some value to assume that this deterministic position is correct until evidence is brought forward which shows that it is not.

Systematic attitudes on psychological questions influence one's interests and evaluation of all kinds of experimental work, but the

most important results and conclusions in our science are based on experimental and observational data. The facts of every science are constantly changing because research and investigation are continuous; and the general point of view of each science is very largely determined by the methods which it employs in the collection of additional data.

UNIVERSITY OF WISCONSIN.

HULSEY CASON.

BOOK REVIEWS

J. G. Hamanns Stellung in der Philosophie des 18. Jahrhunderts.
ERWIN METZKE. Halle: Max Niemeyer. 1934. viii + 145 pp.
RM 10.

The works of J. G. Hamann (1730–1788) are seldom read, and their peculiarities of style and conception at first make an enigmatical impression beyond which it requires care and art to penetrate. The University of Königsberg is observing the two hundredth anniversary of this extraordinary native-son by the preparation of a new critical edition of his works under the very competent direction of Josef Nadler.¹ The present special study by Erwin Metzke, also published in the *Schriften der Königsberger Gelehrten Gesellschaft*, aims to expound the main themes of Hamann's thought systematically, and to disclose his true position in the development of modern philosophy more correctly than has been done heretofore.

It is a needed and in many respects a timely work. Hamann is generally grouped with F. H. Jacobi as one of the eighteenth-century *Glaubensphilosophen* who criticized rationalism and rehabilitated the principle of belief or faith. The present study, however, lays a proper stress on the uniqueness of Hamann's position. Whereas Jacobi offers a formal, one might indeed say a rationalistic defense of irrationalism, the essence of Hamann's position is to insist on the central significance of the individual's entire living relation to reality, which reason may in some degree serve, but which it can neither control nor adequately formulate. What Hamann has to say about faith, not as a formal principle, but as belief, inseparable from personal condition and experience, is especially noteworthy, and so also is what he says about dynamic speech as the great organon in which living reality is grasped and communicated.

Other phases of Hamann's thought, although always idiosyncratic, seem less significantly original. After a conversion, which followed upon a crisis in his twenty-eighth year, he understood his personal relation to reality to be essentially Lutheran, a witness to

¹ Cf. Nadler, J., *Die Hamannausgabe*, Halle, 1930

the dependence of human creatures upon the creative power of God. Discussing and illustrating with numerous citations Hamann's views on such topics as God, man, history, nature, self-knowledge, freedom, revelation, reason, faith, and language (only with respect to his views on society is one left curiously uninformed), Metzke concludes that Hamann used his Lutheranism to combat rationalism and the metaphysics of substance, and that in so doing he promoted tendencies which led in German idealism to a new doctrine of spirit, although at the same time he avoided the rationalistic, pantheistic, and humanistic aspects of idealism. In the course of discussion Hamann's relations to Hume and to Kant are effectively indicated.

But Hamann has apparently had to wait until to-day, when—after Nietzsche and after Kierkegaard—a new “Auseinandersetzung” is taking place in German thought between Lutheran Christianity and humanistic idealism, to find true successors. One feels that the author of the present monograph is not only sympathetic, but is virtually enlisting Hamann on his side in a contemporary discussion. This imparts a lively and timely interest to his pages, but it may be questioned whether it is altogether to their advantage as historical criticism. No doubt Hamann's “standpoint” is more fully reproduced here, where he is represented as a neo-Lutheran *Existentialphilosoph*, than in earlier accounts grouping him with Jacobi as a *Glaubensphilosoph*. But perhaps he would be understood even better, and still more instructively, if instead of adopting his standpoint one attempted to carry out in a more modern spirit the implications of his position and studied him in all concreteness as an individual living in specific real relations.

H. L. F.

A Study in Kant's Aesthetics. The Universal Validity of Aesthetic Judgments. BARROWS DUNHAM. Lancaster, Pa.: Privately printed. xiii + 142 pp.

Dr. Dunham has given us in brief compass a surprisingly adequate review of Kant's main esthetic doctrines together with a fair appraisal of them against the background of ideas current during Kant's lifetime and in the light of the author's own esthetic insight. The main emphasis falls on the possibility of formulating and validating an objective principle of taste. While admitting that “on the ‘empirical’ level [Kant's] judgments are of dubious merit” the author believes that, “in his search for the basic principles and the ultimate explanation of taste, no critic and no philosopher has equalled his profundity” (p. 10, cf. p. 14). But though “Kant rightly conceived the nature of his goal” (p. 121) he failed to reach it because he refused, for reasons which the author indicates, to ad-

mit the possibility of a really universal and necessary principle of taste (p. 124). Dr. Dunham attempts, in the last chapter, to make good Kant's failure. He formulates the ultimate principle of taste, which is universally and necessarily valid because it is presupposed by all esthetic experience (Kant's own method of validation), as follows: "An object is beautiful to the extent and the degree in which, by its form and sensuous qualities, it excites all the activities of the human self to the most refined and harmonious interplay of which they are capable" (p. 131). The main body of the book, meanwhile, is devoted to a review of the development of Kant's ideas from 1764 to 1790 and to a critical examination of Kant's description of the esthetic judgment and its subjective and objective bases together with Kant's treatment of feeling, charm, emotion, and the interplay of the imagination and the understanding.

Dr. Dunham has a real gift for terse statement and happy phrasing; the book is genuinely readable. The general treatment of Kant is sound, though I question certain interpretations, e.g., of the first *Critique* (pp. 55 ff.), of Kant's Ideal of beauty (p. 66) and of the notion of "purposiveness without the idea of purpose" (pp. 29 ff.). Competent use has been made of Kant's non-esthetic writings (except on pp. 80 ff.) and of English and foreign critical works. I heartily commend the author's repeated attempts to relate Kant's doctrines to Kant's own esthetic tastes and to the art and criticism of the period, and am sorry that more was not made of Kant's relation to late eighteenth-century romanticism, classicism, and the tendencies exemplified in the rococo. The author's own account of taste raises numerous unsolved problems; the objectivity of beauty, for example, is at times seemingly asserted, elsewhere denied. The book's greatest weakness is its rather inexcusable failure to come to grips with the problem of natural *vs.* man-made beauty. These defects will, I hope, be remedied in a more systematic study of esthetics for which Dr. Dunham obviously possesses high qualifications.

T. M. G.

Die Problematik des Völkerbundes bei Kant und Hegel. JOHANNES HOFFMEISTER. (Recht und Staat in Geschichte und Gegenwart, 111.) Tübingen: J. C. B. Mohr. 1934. 48 pp. 1.50 M.

This pamphlet compares and contrasts the ideas of Kant and Hegel on the subject of war and peace, defending Hegel's philosophy of international relations as not only more realistic than Kant's, but as a more positive contribution to the practical question of the transition from *Volksgeist* to *Weltgeist*.

H. W. S.

The Story of American Dissent. JOHN M. MECKLIN. New York: Harcourt, Brace and Company. 1934. 381 pp. \$3.50.

Many observers of American life have noted the paradoxical fact that for "great dissenting-revivalistic churches, the Baptists, the Methodists, and the Presbyterians . . . to-day two-thirds of all Protestants, were a little more than a century and a half ago, despised dissenting minorities in the powerful colonies of Massachusetts and Virginia." This observation Professor Mecklin has made the theme of a lively historico-sociological study, devoting all but a few pages of his narrative to the period prior to 1800. Dissent he defines broadly as opposition to all forms of religious establishment, of which the Quakers and the Baptists furnish the best examples. The contribution of the Methodists to the cause of religious liberty in America he finds "almost negligible." Once the goal of dissent, namely, legalized tolerance, was attained, "dissent itself lost its reason for being and disappeared as an active force, leaving the intolerant and self-centered tradition of evangelical piety in complete possession of the field." The author retells with much vigor, sometimes himself succumbing to the Puritan's fondness for question-begging epithets, the familiar stories of Roger Williams and Ann Hutchinson, adding a valuable chapter on "The Dissenter and the Yankee Tax Collector." Unlike New England, Virginia kept within itself articulate dissenting groups, and so achieved that separation of church and state which Professor Mecklin characterizes as "the greatest single contribution of the dissenting tradition to American life." To-day he holds that religious dissent is dead, and its churches "cultural anachronisms," too often using legal tolerance for the purposes of spiritual intolerance.

H. A. L.

Two Ways of Thinking. HUGH P. MACMILLAN. Cambridge: The University Press. New York: The Macmillan Company. 1934. 46 pp. 75c.

The Rede Lecture, delivered at Cambridge last May by Lord Macmillan, is an interesting comparison of the logical and the empirical types of mind. He finds the two types in the contrast of Scot and Englishman, and of Scotch Civil Law and English Common Law, as well as elsewhere. Some of his generalizations are debatable. For instance, he says the logical type of mind, being doctrinaire, tends towards democracy; whereas the empirical, facing facts, is naturally aristocratic.

H. T. C.

Pensée constructive réalités spirituelles. Essai de psychologie formelle à propos de l'ascétisme religieux. PIERRE GUERIN. Paris: Félix Alcan. 1934. 451 pp.

This is an impressive and thoroughgoing attempt to apply phenomenological analysis to religion. The author selects piety in its empirical forms as the "object" whose transcendental reality or idea he seeks to portray. The result is an admirable critique of the common Catholic practices of piety: the celebration of the mass, confession, prayers, liturgy, and regular devotions. This is followed by an analysis of the relations between the soul or subject and the objective activities of piety. Though the analysis is somewhat cumbersome, especially in its attempt to avoid any theological implications whatsoever, this book is undoubtedly a major contribution to the psychology of religion and to an understanding of the functions of piety in the moral life.

H. W. S.

Insights into Modern Hinduism. HERVEY DEWITT GRISWOLD. (Studies in Religion and Culture. Schermerhorn Lectures II.) New York: Henry Holt and Company. 1934. Pp. xii + 288. \$2.00.

The author introduces his subject with three chapters of a general and historical nature, one dealing with Hinduism in its environment and in its relation to world religion; another setting forth six characteristics which have marked Hinduism from the beginning; a third giving an account of Ramanuja and his position. These make substantial contribution to the general theme of the book. Four chapters describe movements of the last century, showing how Islam and Christianity, especially the latter, influenced the life and thought of leading religious teachers. Eleven chapters, consisting of biographical sketches (as also do the four just mentioned), show how unrest and movement find expression in Hinduism. Some of these religious leaders are Hindus, some are Christians. The latter retain substantial elements of the older faith. One man from the West, who is included in the biographical studies, introduced Hindu method into his Christian practice. The qualifying phrases attached to the various names in the sketches bring out the exact points of significance. Two chapters, devoted to untouchable groups, Bhangis and Chuharas, show how in these strata also Hinduism exercises its absorbing influence and brings strange elements within its grasp. The author has the rare ability to sift out from the enormous mass of detail which characterizes Hinduism just those elements which are of significance for his theme. All through the style is direct and concise. Just enough

of the past is brought into the picture to, make clear his points. Movements and persons with which he has been at home for many years are the means whereby he opens up aspects of Hinduism and shows how contemporary religious influences are at work within it. The bibliography contains some important and little known references. Dr. Griswold sustains the reputation which he has long had in India of being a great scholar who has studied with insight and sympathy the religious life of that country.

GEORGE W. BRIGGS.

DREW UNIVERSITY.

OTHER NEW BOOKS AND JOURNALS

PHILOSOPHY OF SCIENCE. Volume I, No. 4. Abstract Logic or the Science of Modality: *H. B. Smith*. An Examination of the Quantum Theories III: *W. M. Malisoff*. Physico-Mathematical Aspects of the Gestalt-Problem: *N. Rashevsky*. Logical Analysis of the Psychophysical Problem. A Contribution of the New Positivism: *Herbert Feigl*. The Parallel Development of Method in Physics and Psychology: *Charles Hartshorne*. A Preamble to an Organismic Theory of Knowledge: *O. O. Norris*.

GIORNALE CRITICO DELLA FILOSOFIA ITALIANA. Anno XV, Fasc. IV-V. La filosofia di Ernst Cassirer: *H. Levy*. Filippo Buonaccorsi detto Callimaco e le correnti filosofiche del Rinascimento: *B. Kiezkowski*. Studi hegeliani: *G. Cogni*. Il pensiero filosofico di Maurizio Blondel nel suo sviluppo storico: *G. Durante*.

ERKENNTNIS. Band 4, Heft 4. Das Weltbild und die Begriffsapparatur: *Kasimir Ajdukiewicz*. Die signifikanten Grundlagen der Mathematik. I.: *Gerrit Mannoury*. Bericht über den 8. Internationalen Kongress für Philosophie in Prag.

Seeberg, Erich: Meister Eckhart. (Philosophie und Geschichte, 50.) Tübingen: J. C. B. Mohr. 1934. 64 pp. (This essay is an introduction to the proposed edition of Meister Eckhart's works. It outlines the problems that face the historians of Eckhart: the relative value of the Latin and German works, the development of Eckhart's thought, its Neoplatonic background and its ethical implications.)

Smith, T. V.: Philosophers Speak for Themselves. Guides and Readings for Greek, Roman, and Early Christian Philosophy. Chicago: University of Chicago Press. 1934. xxiv + 800 pp. \$4.50. (A book of readings from the Greek and Roman philosophers from Thales to Augustine, together with biographical and bibliographical notes and a brief survey [Appendices III & IV] of Scholastic philosophy and theology.)

NOTES AND NEWS

We regret to announce the death on November 18 in Paris of Professor James Mark Baldwin.

Professor Baldwin was born January 12, 1861, at Columbia, S. C. After attending Princeton, the Universities of Leipzig, Berlin, and Tübingen, he became fellow and instructor at Princeton University in 1885. From 1887 to 1889 he was Professor of Philosophy at Lake Forest University; from 1889-1893 he was Professor of Logic at the University of Toronto; he returned to Princeton in 1893 as Stuart Professor of Psychology. From 1903 to 1909 he was Professor of Philosophy and Psychology at Johns Hopkins University. After that he lived abroad for the most part.

In addition to writing his well-known works on genetic philosophy and psychology, he compiled the *Dictionary of Philosophy and Psychology* (1901-1906) and was editor of the *Psychological Review* from its foundation in 1894 to 1909.

We regret to announce the death on November 9 of Dr. Benjamin Rand at Canning, Nova Scotia. Dr. Rand was librarian emeritus of the Emerson philosophical library at Harvard University.

He was born July 17, 1856, at Canning, Nova Scotia, and educated at Acadia College, Nova Scotia, and at Harvard, where he received the A.B., A.M. and Ph.D. degrees. He also studied at the University of Heidelberg. Intermittently between the years 1885 and 1902, he was a member of the faculty of Harvard University and was made librarian of philosophy in Emerson Hall in 1906, retiring a few years ago. He was the author of several works of philosophical history and bibliography.

We have received the first number of the *Neue Folge des Logos*, which indicates that this former "International Journal for the Philosophy of Culture" has been "coördinated" to the exigencies of the present in Germany. The main title of the journal is no longer *Logos* but *Zeitschrift für Deutsche Kulturphilosophie*, and the new editors declare that they are decidedly done with "the pale apparition of an international philosophy of culture." However, they welcome contributions and exchanges from those of other countries whose ideas of culture have genuine roots in their own "national distinctiveness." The editors also invite the coöperation of German men of letters, announcing it as their policy to have the journal less "professional." They aim to serve the trend toward a com-

munity of cultural studies, rather than to foster isolated and narrow departmentalism.

The place of Richard Kroner as editor-in-chief is now taken by Professors Hermann Glockner of Giessen and Karl Larenz of Kiel. Like his predecessor, Glockner is a former student of Heinrich Rickert's. The fact that he shares editorial responsibilities with Professor Larenz seems to imply that, under the direction of the latter, special emphasis will be given to legal, political, and social philosophy. The names of E. Cassirer, E. Husserl, F. Meinecke, and R. Otto have disappeared from the list of collaborating editors, which now reads as follows: Bruno Bauch, Julius Binder, Hans Freyer, Theodor Haering, Nicolai Hartmann, Heinz Heimsoeth, Erwin Guido Kolbenheyer, Ernst Krieck, Karl Alexander von Müller, Hans Naumann, Heinrich Rickert, Erich Rothacker, Walther Schönfeld, Richard Siebeck, Eduard Spranger, Hermann Stehr, Karl Vossler, Heinrich Wölfflin, Max Wundt.

The leading articles of the first number are as follows: *Deutsche Philosophie: Herman Glockner*. *Volksgeist und Recht. Zur Revision der Rechtsanschauung der historischen Schule: Karl Larenz*. *Rechtsphilosophie, Jurisprudenz und Rechtswissenschaft: Walther Schönfeld*. *Die Abstimmungsurnen des deutschen Reichstags. Ein Beitrag zum gegenwärtigen Problem der künstlerischen Aufgabe: Hubert Schrade*.

The *Zeitschrift für Deutsche Kulturphilosophie* will be published 3 times a year by J. C. B. Mohr (Paul Siebeck) in Tübingen; subscription 5 Marks.

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The Book of Diogenes Laertius. Its Spirit and Its Method by Richard Hope. (Columbia University Press, 1930.) xiv + 241 pp. \$3.50.

Telesio, The First of the Moderns by Neil C. Van Deusen. 90 pp. (paper cover) 75 cents.

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Responsibility. Its Development through Punishment and Reward by Laurence Sears. (Columbia University Press, 1932.) ix + 198 pp. \$2.50.

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THE JOURNAL OF PHILOSOPHY

THE PROBLEMATIC SITUATION. ITS SYMBOLIZATION AND MEANINGS

THIS paper will state the outline of a hypothesis in scientific method. This hypothesis will be applied to certain distempers of the human intelligence of emotional origin. Those distempers are all species of the same genus and cover the ground from the various aspects of the conflict of science and religion to the football boy's loss of zest for his game. Somewhere between these limits will be found such failures in the zest for life as John Stuart Mill records in his *Autobiography* as having befallen him, when, after a youth and young manhood of unparalleled intellectual activity, he imagined that his emotional life had been killed. Somewhere within this range of "lost souls" must be found those who refuse to make their stoicism a minor note to the deep enthusiasms of a high religion. In short this paper will lend little support to the conviction of those intellectuals who hold that as soon as one comes to know anything he must lose a corresponding amount of enthusiasm.

The hypothesis advanced in this paper takes its start from two fertile ideas. One of them is found in Dewey's *Quest for Certainty*. The other is found in Mrs. Langer's chapter entitled "Insight" in her book *The Practice of Philosophy*.

There may have been practical activity before there was ever such a thing as knowledge of an objective world. And there is plenty of activity in the human organism to-day that is not initiated or directed by preëxistent knowledge so far as anybody has any right to make assumptions about the matter.

Practical activity is the field of ethics. Emotion with its valuations is the field of religion and of all manner of discourse that deals with the zests, the enthusiasms, and the worthwhileness of living. Factual objectivity is the field of knowledge, common knowledge and scientific knowledge. These fields are interrelated by symbolization. We actually know so little of their interrelations, that the symbolic relation, being the barest of all relations, will protect us from premature assumptions regarding any common nature which the progress of experience may later reveal them as possessing.

Mrs. Langer in her chapter entitled "Insight" in her book, *The Practice of Philosophy*, suggests that a musical composition may be a symbolic pattern of the emotional life. The composition is made

up of objective elements such as melody, harmony, rhythm, pitch, timbre, and whatever else may be analyzed out of music. To each one of these elements in the objective composition corresponds an element of a grand emotional complex. $R(ab \cdot c)$ means the relation by which the objective element (a) in the composition symbolizes a subjective element (c) in the emotional complex for some interpretant (b). Now the emotional elements have the disadvantage that they are not objects of knowledge and therefore are expressible only by symbol. However, there is not necessarily any mystery about them. The case of a football player may be a more intelligible illustration than the musical composition. At any given moment the player carries an atmosphere that gives him his character as a player. His atmosphere is his actual consciousness. It is an emotional complex. It is a whole and its elements are not objects of distinct awareness. Analysis and understanding belong to the field of objective knowledge, but not to that of the emotions. "Knowledge" in the words of Dewey "attends strictly to its own business."¹ The emotional elements can not be analyzed out of the total consciousness of the player. He possesses the total consciousness. It constitutes his instantaneous self at any moment. While the elements of it can not be teased out of it, we may find good grounds for assigning elements to it by hypothesis. That is what hypothesis is for—to bridge over the vast areas of our ignorance so that our researches may go on unimpeded. We may always know something without knowing everything. We may infer that there are elements in the player's emotional consciousness through the following consideration. By something infinitely more delicate than the pressure on an electric button, the player can bring into the focus of his consciousness one object after another, the ball, the opposing quarterback, the score to date, the goal, the grandstand, the distant friend who is listening in on a broadcast of the game. The player is distinctly conscious of these objects, one at a time and only momentarily; never of all of them at once. Yet in a most significant sense these objects are with him all the time. For, if any one of them could be blotted out of existence, his whole character as a player would be correspondingly changed. Every one of these objects has its representative in his consciousness, all the time. That representative is not there as an object. It is there as a part of his emotional consciousness which, as such, he can not isolate in any possible form of experience. An emotional complex may undoubtedly possess elements which are beyond the business of knowledge or of any other distinct form of experience. An emotion is nascent action, one held in restraint. The emotional consciousness is a complex of attitudes,

¹ John Dewey, *The Quest for Certainty*, p. 296.

of possible action in reserve. An action restrained means love, aversion, jealousy, hate directed toward some object. The player's whole emotional complex consciousness, made up of all these possible activities and all these attitudes, unfolds into overt action as the drama of the game develops. The objects of his emotional attitudes are themselves complexes of activity. His concepts of those objects are operational definitions. An object means what he can do about it or what he can undergo in his relations with it. This gives practical activity a very fundamental position in the three phases of experience, action, emotion and knowledge. But this fundamental relation does not by any means reduce the three to an identity. The last word has not yet been uttered regarding the operational definition. For example, the current as a factor of the electric circuit is defined by the operation of measuring it. This operation is described in terms full of concrete qualitative content. But the final concept of current that emerges is empty of all qualitative content. It is a mere *something* that is the same everywhere along the circuit and adds across it. It may exhibit itself as a constancy in the evolution of hydrogen in electrolysis, a constancy in the color of a lamp or of heat evolution, or in the capacity factor of a motor's power. But itself is only a factor of energy, as contentless a concept as has ever entered human intelligence. This concept of current does not carry the qualitative content of the operations which denotively define and measure it. Conceptual knowledge has in it something which could never have been anticipated in any experience actional and emotional out of which it emerges. That is why, in attending to its own business, knowledge does not fully illuminate action and emotion.

The operations which define current denotively, i.e., point it out and direct the process of calibrating ammeters which may be used to measure it, being actions, are not objects of knowledge at all. The symbolizations which we make of the concept current are objects of knowledge.

An element in the emotional consciousness is not identical with some element in an object, nor with any element in an action. But we may proceed on the hypothesis that elements in the three fields mutually correspond. An element in one of these fields may symbolize one in another. Complexes of elements in one field may symbolize complexes in the other. The interpretant may make the translation from the one field to the other, thus solving problems in that other field, just as securely as a mathematician may manipulate chalk marks on his blackboard as symbols of mathematical concepts and propositions. But chalk marks can claim no identity with mathematical concepts. $R(ab \cdot c)$ means that (a) an element in

some musical composition, say, may be a symbol for (c) an element in the emotional pattern in the composer or in the listener. The interpretant (b), in this case an intelligent person, manipulates and translates these objective elements as symbols in a way to solve the problem of organizing his own emotional life into the pattern of the composer's. But if $R(ab \cdot c)$ holds, then $R'(cb' \cdot a)$ also holds. That is, another interpretant (b') may manipulate the elements of his own problematic emotional life into the well-ordered patterns of an objective musical composition of his own production. For in symbolization, one entity (a) in any class of entities whatever from emotions to ink prints may symbolize another entity (c) in any other class of entities whatever, because of the barest kind of correspondence assigned to them. It follows that (c) can just as well symbolize (a) as (a) can symbolize (c). The symbol is that member of the pair which lends itself to manipulation and that depends on the particular direction which the problem takes, not on the character of the interpretant which makes it easy to define. One of the relations, R , deals with a case of a problematic situation out of which appreciation comes, the other, R' , with one out of which a scientific or artistic creation comes.

In the first class of cases the interpretant may be an intelligent person just as in the case of a mathematician manipulating his literal symbols. In the second case there are apparent difficulties. In every case we must think of the interpretant performing the following two functions. It must determine what particular (a) in some one system of entities shall correspond to some particular (c) in another system. This is the interpretant's function as a translator. The second function is that of solving problems involved in the one system of entities by "manipulating" the other system as symbols. In some systems of entities the interpretant can not be a person at all. In some cases it can not even be spoken of as an operator without the invention of metaphysical entities of no possible value except to serve this one purpose. It is possible, one may imagine, that sometime we may accept a metaphysical entity which may be conceived as assuming the burdens of the interpretant's functions. However, the great advantage of the symbolic logic and the philosophy of meaning as treated by philosophers like Mrs. Langer is that they permit the development of scientific methodology, the contemporary form of epistemology, without the premature acceptance of assumptions that later could prove embarrassing. There are advantages in positivism. In considering some systems of entities as symbols whose "manipulation" may be conceived as bringing order out of the partial chaos of a problematic situation in creative work, such as Poincaré's *Mathematical Creation*, the "manipulation" better be re-

garded as going on without a manipulator. The only logical requirement is that the two functions of the interpretant get performed. In the solution of a mathematical or a physical problem, there is the integration of elements of the emotional field, and of brain or other organic actions, ending finally in the abstract objective pattern, say, of a new deductive system, in which chains of syllogisms start from new and unheard-of premises, new categories, a new space system of four dimensions, and an astonishing identification of physical entities like mass with geometrical properties statable in terms of the curvature in a space-time continuum. Now, following the view so far presented, this abstract objective conceptual and logically deductive system has elements in it corresponding to the subjective elements that have been integrated in the emotional field, precedent to the emergence of the objective solution. This intellectual objectivity has come out of the integration of emotional elements as symbols of it, un beholden to a manipulator. The functions of an interpretant, however, have been performed. The brain changes perform the functions of an interpretant. This latter is the matter of the integration of a physical system out of its factors of compossible alternative and competitive integrations. Now a physical system, when its elements are displaced from their normal activity or position, spontaneously regains its stable configuration, through forces resident in the system. These forces after all are turning out to be unnecessary and fictional metaphysical entities. In the Einstein theory of gravitation the planets achieve the pattern of their motion, not by action of forces, but by virtue of a principle of least action by which the elements of motion are integrated into the actual path taken. The principle of least action here, a purely mathematical function, determines the way in which the symbols get "manipulated" in order to solve a problem in the field of action. We here state the manner of the interpretant's functional performance as an impersonal principle of mathematical determinism. Such an interpretant can not be an object of knowledge any more than the elements which it orders can. We know only the symbolization of the interpretant and its activities. Each term in the relation $R(ab \cdot c)$ is a symbol. The thing it symbolizes may or may not be an object of knowledge. The symbol is an object of knowledge.

In each particular field where symbols are integrated, whether of action, emotion, or knowledge, to the end of the creation of scientific or artistic objects, we conceive of the interpretant in terms peculiar to that field. We are always in a special universe of discourse which remains un invalidated after scientific objectivity has come out of it. The conceptual system that emerges from a problem

does not impose its language upon the organism's activities nor upon the emotional drama which has been instrumental in its production. We may continue to speak of the emotional field as an atmosphere, that may clear itself in its own automatic ways, such as by an Aristotelian Catharsis. We may continue to speak of the dramatic crises of the emotional side of creative effort. We may speak of "hunches" which come through something we may name "insight" or even "intuition" to be later verified or discarded in the field of scientific objectivity. We may clear up the emotional life by some system of psycho-analysis. All this is not scientific, of course not. Science is knowledge and knowledge keeps to its own field. We can symbolize the emotional field in ways that facilitate control of it, but that is not knowledge. It is art. And in such connections we may use the traditional symbolizations that belong to poetry, art, and religion. It is not science, but it is a part of scientific methodology; for it conditions the emergence of knowledge. The language of art and religion is not superseded by that of science any more than knowledge can disillusion our emotional experience of the world.

The distempers of emotional origin mentioned in the opening paragraph of this paper, including many things from the innumerable aspects of the conflicts of religion and science to anybody's loss of zest for his work or his pleasure, all come from maladjustments of action, emotion, and knowledge in life experience. These maladjustments disappear when we are grappling effectively with our problematic situations. Without being committed to full agreement with Dewey, the particular view here presented follows him in holding that there is no preëxistent essential nature in knowledge whereby its pursuit necessarily leads to impairment of that other way of experiencing the world which we call action, nor to the degradation of values that come out of action and motivate its continuance and development.

Professor Bridgman in an article in a popular magazine² has sounded the praises of "Intellectual Integrity." The equally important values of the integrities of practical action and of emotion might be insisted upon. Now the term "integrity" as it will be used in this connection has to be defined. Integrity has to do with *wholes*. Integrity is achieved in the process out of which wholes arise from integration of the factors in a problematic situation. The field of scientific knowledge readily breaks up into such wholes as a philosophy of Holism might cherish. They are wholes or isolates, or systems or perhaps monads. The symbolic logic will give a modern meaning to the Leibnitzian proposition that monads mirror other

² "The Struggle for Intellectual Integrity," *Harper's Magazine*, December, 1933.

monads. Such wholes are exemplified in the electric circuit, a solar system taken in its purely mechanical aspects, an atom, a Carnot cycle, or an Einstein space-time continuum. Such wholes are always universals and they come out of the solution of problematic situations. Wholes are isolated when a problematic situation is isolated. Scientific genius is exhibited in the art of biting off no more than the biter can chew. If the universe did not possess this holistic structure, the apostles of complexity might continue to occupy the stage along with their blood relations, the worshippers at the shrine of futility. In the development of these wholes, isolates, or monads out of problematic situations, the three ways of experiencing are involved: action, emotion, and knowledge. The emerging wholes may have, and will have, the quality of integrity if they exhibit in the end result complete objective factuality according to the standards universally recognized by science.

The problem solver in such a case is very likely to attain the three integrities, the integrity of practical action, contributing to his ethical achievement, the integrity of emotional life and its values, and intellectual integrity. Intellectual integrity has for its conscience the feeling that the seeker is untrue to something deep within him if he refuses to follow a process of thinking to its logical terminus simply because the consequences are going to be uncongenial to his emotional biases (Bridgman, *Harper's Magazine*, 1933). The problem solver who follows a problem through to its attainment of intellectual integrity will have necessarily, in so far, won his emotional integrity. And since such a solution *works*, he will have, so far as his particular whole is concerned, won his ethical integrity. At the very onset of his problem the would-be-solver was forced to discipline his emotional nature so sternly that he may have cherished the illusion that he had actually suppressed it. That was an error, for all asceticism is fundamental self-deception. In the end factual objectivity, i.e., scientific knowledge, will have been obtained through an emotional organization from which all irrelevant emotional complexes had been eliminated. An emotional integrity that is thus disciplined and won in the same struggle with the truth itself, can never be disillusioned through any possible level of intellectual achievement. The football player will not lose his ideals if he really solves his problems. If the emotional appeal of the grandstand does not find its true relevancy to the game, the football player's career may end in the disgust of so-called disillusionment, which is just another name for failure to attain the three integrities.

In the onset of a problem, irrelevant concepts from the field of knowledge, so-called preconceived ideas, and irrelevant emotional

complexes may together block repeated struggles for a solution. In the end there is both a reorganization of objective knowledge and of the emotional life, the world of values. There will be no damping down of the deep enthusiasms of life, artistic, religious, practical, or intellectual, if intellectual, emotional, and ethical integrities have been won through the strenuous ways of science. If irrational likes and dislikes have been wilfully retained the intellectual outcome will be mere rationalization of a vain emotionalism. The emotional life that develops along with such intellectual miscarriages ends in disgusts, disillusionment, and buries enthusiasms in the grave of cynicism.

It is a striking fact that the great scientists never betray this type of pessimism. When religion refuses to surrender its ancient valuations, irrelevant emotional complexes dictate conceptual objectivities which scientific advance can not tolerate. But long before science shall have pronounced its adverse judgment, that religion will have lost its soul from its failure in intellectual integrity along with which the other integrities also perish. Religion perishes when it refuses its Cross, the potent symbol of the creative spirituality of the West. The Cross is the surrender of irrelevant concepts and irrelevant sentiment in the face of any problem in whatsoever field. The Cross is the symbol of reconciliation of religion with science.

The values that are involved in action and emotion which do not issue in objectively verifiable knowledge are precarious in the extreme. Yet knowledge is conditioned by existences more primitive than itself. These primitive things are action and that whole realm of possible action, restrained in the interest of waiting choices, in other words, emotion. These conditions, prior to knowledge, when they issue in knowledge, point to a nature that is unlimitedly plastic, however rigid it may appear to human wilfulness. A science that finds its "ultimate" premises subject to revision and radical generalization spells plasticity of nature just so far and that is pretty far to one who can get anywhere near the firing line of science to-day. How a social science is possible under these circumstances is a very solemn question. Human society to-day is built upon the gifts of science coming through a very few exceptional individuals, and society is not made up for the most part of such individuals. This dilemma is not one to inspire either enthusiasm or stoicism. The one betokens a lack of realism, the other an obliviousness and insensibility to impending tragedy. There is nothing forbidding in tragedy; for human history is made of it; but the tragedy that exceeds the possibility of human tolerance is one whose outcome leads to ultimate hopelessness.

Enthusiasm and stoicism are probably superficial counterfeit impressions of the spirit yet to be evoked from the fast developing drama of contemporary civilization. It is probably not too much to say that the emotional attitude out of which a social science may come has as yet been only imperfectly experienced, much less named. It resides among the values yet to be evoked from experience that transcends any knowledge which we now have. But who will say that such experience is not to-day in process of realization.

This is a philosophy of nominalism so far as knowledge is concerned. We know a universal by its symbolic pattern. There are two other ways of experiencing a universal, by action and by emotion. We *engage in* an action. We *have* an emotion. We *know* an object. *Engage in*, *have*, and *know* are correlative and mutually exclusive terms. Besides knowing the symbolic pattern of a universal, we may actively participate in it and we may entertain emotional attitudes implicated in it.

How far these views coincide with John Dewey's and how far they venture beyond the bounds which Mrs. Langer respects, he who reads can readily judge.

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ABSTRACTS OF PAPERS TO BE READ AT THE THIRTY-FOURTH ANNUAL
 MEETING OF THE EASTERN DIVISION OF THE AMERICAN
 PHILOSOPHICAL ASSOCIATION, NEW YORK UNIVERSITY,
 DECEMBER 27, 28, AND 29, 1934

A Definition of Abstract Systems. PAUL HENLE.

Contemporary discussions of deduction in abstract systems seem to give inadequate accounts of proofs of independence or non-deducibility. This is to say that, while the concept of independence is discussed, there seems to be no sufficient explanation of how it is that independence proofs, of the sort commonly employed in postulate theory, actually do succeed in proving independence. The reason for this difficulty lies in the fact that independence proofs commonly make use of so-called examples, a different kind of entity from postulates and theorems. These examples deal with a specified number of elements and describe the relations between them by stating the holding or failing of the relation for each permutation of elements. Slight consideration is sufficient to show that examples may be abstract, i.e., schematic, in the same sense in which postulates and theorems may.

This paper proposes to define an abstract system as a class of

abstract examples dealing with the same variables. The advantages claimed for this definition are the following: (1) By means of a few highly plausible assumptions, it is possible to show that every system, in the sense defined above, is deductive, i.e., a set of laws may be stated from which all its properties can be deduced. (2) The relations of laws of systems to examples may be clearly enough shown to justify the usual independence proofs. (3) The possibility of describing systems in non-postulational terms is explained. (4) The definition permits an elaboration of the concept of completeness of systems.

Contradiction. OTIS H. LEE.

The theory of contradiction involved in the assertion that contradictory propositions can not both be true, implies that there is no such thing as contradiction, neither in facts nor in knowledge nor in propositions. For this theory, contradiction is static, a kind of impossible fact. But contradiction is metaphysical in nature, and can be understood only through its function as the moving principle of experience. Every judgment asserted is asserted as true without limitation. This is not a conscious claim to all-embracing absoluteness, but rather a naïve assurance, which is of the nature of thought. Now the activity of thinking lies in solving specific problems, either theoretical or practical; and every problem involves a negation and limitation of the thought for which it exists. This limitation of thought by the situation which confronts it is contradiction. This contradiction holds between two positive opposites; between A and B , not between A and $\neg A$. As we say, the facts contradict us. The inadequacy of knowledge to a situation is not a disagreement between the two, accompanied by the emotions of surprise, confusion, or disappointment. The experience of such inadequacy, confused, and preceding any clear analysis into agreements and disagreements, is the experience of contradiction, which is involved in all thinking.

A Solution of the Paradoxes which Avoids the Theory of Types.
FREDERIC B. FITCH. (Introduced by F. S. C. Northrop.)

A system of logic is formulated by means of an algebra or abstract system, using ordinary mathematical postulational methods. In general $x(yz) = (xy)z$ and $xy = yx$ do not hold for the algebra. By definition $xyz = (xy)z$. Any function $f(x_1, x_2, \dots, x_n)$ may be denoted by the algebraic expression $fx_1x_2 \dots x_n$, in accordance with Schönfinkel's method. The operators I , B , and C are used. They are such that $Ix = x$, $Bxyz = x(yz)$, $Cxyz = xzy$. Certain other operators which are used by Schönfinkel and Curry are here

omitted, in particular the operator W such that $Wxy = xyy$. The general proposition $(x)fx$ is expressed by G_1ff . Analogously $(x, y)f(x, y)$ is expressed G_2fff , and in general the number of occurrences of f will be one greater than the number of "apparent variables."

It can be shown that by treating the general proposition in the above way and by omitting W an exceedingly powerful logic is made possible, and one that precludes all known ways of reaching the paradoxes of Mengenlehre. Furthermore, no theory of types is required. The logic is two-valued, but it should be possible to construct analogous many-valued systems.

The algebra employed contains a Boolean algebra corresponding to every positive integral value of n , including zero. The case for $n = 0$ gives the logic of propositions; for $n = 1$, the logic of classes; and for $n = m$, where $m > 1$, the logic of m -adic relations. The algebras of these different sublogics are developed simultaneously from the fundamental set of postulates.

Toward a New Synthesis in Esthetic Theory. MARJORIE S. HARRIS.

Present-day esthetic theory tends to be sophistic. By *sophistic* I mean that the individual in some unique aspect is regarded as the measure of things esthetic. But views similar to aspects of Plato's thought still obtain. Also there is emerging a new synthesis in esthetic theory. It will be possible only to suggest a substantiation of these claims through reference to the views of Leo Stein and Clive Bell.

Mr. Stein's position is, in the main, sophistic. He holds that the felt interest of the moment is central in the organization of works of art. Yet he is Platonic in claiming that colors and geometrical forms *per se* have genuine esthetic worth; in assuming that certain attributes are essential to works of art; and in positing the goal of esthetic activity as "completest dedication to the thing itself." From these positions a newer view is developing as seen in Mr. Stein's observations concerning the esthetic object and in his study of the self involved in the esthetic experience.

Sophistic in claiming that the appeal of *significant form* is merely to the feeling self, Mr. Bell is, however, Platonic in maintaining that the artist must work in accordance with certain laws and embody certain attributes in his art. Emerging from these positions is Mr. Bell's conception that the range of objects that may stimulate the esthetic experience is wider than anticipated either by those working in accordance with classical tradition or those influenced exclusively by the new movements.

A Metaphysic of Design without Purpose. MERRITT H. MOORE.

The idea of design is basic in any systematic statement of philosophic problems. It is technically closely related to the concept of order. In popular thought it is difficult to divorce these ideas from those of a designer or an orderer. Even astute philosophic criticism has been confused to the point that it is difficult to separate the idea of design from that of purpose. It has been thought that the two together are requisite to a rational statement of reality.

It is my contention that the notion of purpose is unnecessary and irrelevant to those of design and order. It is impossible to account for the order in our experience unless we admit an objective order in nature. On this point Cournot is nearer right than Kant. This order could arise in nature either through the purpose of some external being or process; or it could arise as a result of the internal nature of the ordered system.

From the point of view of speculative philosophy the latter is the more feasible, the more adequate, and the more reasonable alternative. From the point of view of logic it is the more probable alternative. The notion of design and order without purpose is not only the simpler of the two alternative metaphysical positions involved; it is also as completely adequate as the other alternative. It has long been a recognized principle of reason that the simplest among any alternatives, which equally well account for all factors in a given problem, is to be preferred over a more complex explanation.

Teleology and the Idea of Value. ROBERT C. BALDWIN.

Efforts to define teleology without reference to purpose and purpose in terms of systematic unity break down. There is evidence in recent discussions that the source of confusion is generally overlooked. It is proposed to approach the subject from three sides.

Henderson's widely-cited argument faces the dilemma that too much or too little is proved: it issues either in a position like that of "Paley, with the science brought up to date and God left out," or, if value categories are ignored, in the simple assertion that the environment represents a very improbable toss of the cosmic dice, but one no more improbable than any other. Certain metaphysical assumptions basic to the argument are evaluated.

Hobhouse, suggesting what may be the only sound criterion of the teleological inter-relationship of the parts of the organism, fails to instance a process which satisfies the criterion, except on the level of the conscious willing of ends. This failure has an important bearing on the mechanist-vitalist controversy.

Absolutistic metaphysics, putting time and purpose in the absolute, fails to justify its claim to the advantages accruing from having the absolute in time. Absolutism can not do with purpose, and it can not do without it: this is its greatest strength and its greatest weakness. But, to reverse Bosanquet's dictum, if teleology is to have a meaning it must abandon the notion of simple systematic unity, of a totality which is perfection, and fall back on the idea of purpose as somehow valid and ultimate.

Is Scientific Verification Possible in Philosophy? C. J. DUCASSE.

Philosophy, like the sciences, aims at knowledge and not merely opinion. The typical knowledge-producing method is that of Hypothesis-Deduction-Verification. In what form if any is it available to philosophy?

Typical philosophical problems would be: What are Truth, Perception, Mind, Objects, Right, Beauty, etc.? The answer to any such question essentially constitutes a definition, no matter how complex, of the particular term concerned. But such a definition is not a merely verbal, arbitrary definition, for the word to be defined already has some, at least in part unquestioned, application and inapplication. And, relatively to that which the word admittedly does and does not apply to, the proposed definition of the word is demonstrably either tenable or untenable, for it constitutes a hypothesis as to what the word can and can not connote if it is to have the applications and inapplications that it admittedly does have. These constitute the facts by comparison with which the tenability of the hypothetical definition is to be tested. The test is whether anything admittedly denoted by the word can be found, to which the proposed definition is inapplicable; and whether anything admittedly outside the denotation of the word can be found, to which the proposed definition is applicable? Any proposed definition remains tenable so long as no such cases can be found. A definition which meets this test permits us to decide in a non-arbitrary manner whether some of the *disputed* applications of the word are or are not correct.

The Theory and Practice of the Concrete Universal. HAROLD R. SMART.

As ordinarily understood the universal is something which *essentially and necessarily* exhibits itself in recurrent instances, bare particulars of repetition. It is a common character, property, or relation, separable from, and independent of, the particulars. The view here advocated identifies the universal with individuality or system, and hence insists on the inseparability of universal and particular as aspects of the real; while it allows that so far as finite

realities are concerned, a potential plurality of instances, as a strictly subordinate feature of the universal, is possible. In mathematics, where utter numerical diversity is at a premium, this subordinate feature is most prominent, and hence when mathematics is taken as our ideal of knowledge and reasoning it is an easy mistake to construe the universal as "abstract."

On any view the universal somehow transcends the given, the present, and the barely existential. But such transcendence is merely parodied by the doctrine of the subsistence of universals. The criticisms of Kemp Smith and S. Alexander of the universal as concrete are motivated by dislike of the supposed metaphysical implications—a timeless, Spinozistic, superrelational Absolute. Both critics, however, join with Dewey in maintaining the indissolubility of universality and particularity in the real. This suggests that their criticisms and disagreements might be met by proper emphasis on the thesis that the concrete universal is a self-developing totality. In this respect the applications of this doctrine to problems of logic, esthetics, and ethics are most suggestive.

Time and the Absolute. PAUL WEISS.

The moderns pride themselves on "taking time seriously," which is their way of saying that they take change for granted and explain away the fact of persistence. Newtonians, of whom Einstein is the most consistent, on the other hand, take persistence for granted and explain, or explain away, change. Both sides commit the same fallacy of "essential completeness" of which Whitehead's "simple location" is a somewhat dubious and specialized instance. *To be is to be incomplete.* The essence of objects consists in the tendency to incorporate others within themselves; in a striving to become the Absolute. But it is precisely because no object can absorb all the others that the Absolute is only an unattainable ideal of being and time must go on without end. Things can change only because they persist, and can persist only because they change.

The Finite Universe and Scientific Extrapolation. BENJAMIN GINZBURG.

The Kantian doctrine of the antinomies, cornerstone in the only thorough-going attempt ever made to justify the fundamental procedure of scientific extrapolation, has been challenged by the recent development of finite cosmological theories. Kant justified ordinary scientific extrapolations from the known here and now into the unknown elsewhere and future (or even into the past) as being formal anticipations of experience and thus subject to experiential verification or revision; by the same token cosmological extrapola-

tions were declared invalid because no possible verifying experience can be conceived without contradiction. Since the new theories claim categorically to set spatial and temporal limits on the universe, we must either find a new method of justifying the truth of science or else see where the theories are wrong.

Investigation reveals, however, that the Einsteinian finite universe, the *fons et origo* of the later models of the universe, was based not on any sensationally new facts of a character to upset the validity of Kant's contentions, but merely on the desire to solve cosmological paradoxes which, when they were submitted to Newton by Bentley, the great British physicist had the good sense to dismiss as outside the domain of positive science. The timidity of philosophers in combatting Einstein's cosmological doctrine, together with the ignorance of astronomers as to the philosophical questions involved, has encouraged a mushroom growth of cosmological tendencies in astrophysics to the extent of menacing the development of positive science, since in the conflict of cosmological with positive scientific theories (the age of the universe vs. the theories of stellar evolution) most astronomers seem to prefer to cling to their metaphysical speculations.

The Spurious Problem of Evidential Weight. CHARLES A. BAYLIS.

J. M. Keynes, in his *A Treatise on Probability*, distinguishes between the *weight*, that is, the mere *amount*, of the evidence for an assertion of probability, and the favorable or unfavorable *nature* of such evidence. Although probability is conferred by the latter alone, nevertheless, Keynes urges, "We ought to take account of the weight as well." Why we ought to, he admits he does not know.

This paper is an attempt to show that in cases where we rely on a probability based on a large rather than a small amount of evidence we do so because the larger amount of evidence includes facts on the basis of which we can know that it is more probably *typical* of all possible evidence than is the smaller amount. In the absence of more specific facts such knowledge may be derived from the general principle that the greater the quantity of knowledge on which a judgment of probability is based the more probable it is that all important determining factors are known.

Weight is not a factor independent of probability which needs to be considered in addition to the probability conferring powers of the evidence. These powers, indeed, usually do increase as weight does, but they alone need to be considered and not weight in addition. The problem of weight as distinct from that of probability is a spurious one.

Arguments for the Probable Truth of Realism. S. KERBY-MILLER.

This paper discusses some recent attempts to show that realism is probable. Particular attention is given to the argument of H. H. Price in his book, *Perception*, but the principle brought out has general application. Mr. Price bases his argument upon an analysis of "perceptual consciousness" in which he discovers an *a priori* notion of the "complete material thing." This has two parts related by conjunction, the "family" of sense data and the "physical occupant" which has "causal characteristics." The "family," he argues, may be interpreted phenomenally but the experiential confirmation of concept of the "physical occupant" allows us to conclude that it is highly probable that there exist physical objects, having causal characteristics and "intrinsic characters" which we can not know. Examination of his argument shows, however, that the most that is confirmed or rendered probable, on his premises, is that certain *a priori* (mental) concepts may be successfully used to organize and anticipate sense-data.

Russell's argument is, in the end, confronted with this difficulty, and so also is the pragmatic argument if the latter is based upon a phenomenalist analysis. Based upon a biological analysis it begs the question.

If we say, as in strictness we ought to say, that probability for a proposition can only be established on the basis of *independent* propositions, it seems very unlikely that there could be a sound argument for the *probability* of realism. Sound arguments for realism can be based only on indicative propositions the objects of which are the entities, or situations, or events which the realist asserts to have existence.

Royce's Early Philosophy of Religion. GEORGE DYKHUIZEN.

Whereas in the later stages of Royce's philosophical thought voluntarism was called to do service for his absolutism, in the early stages it was made the basis of a relativistic, pragmatic philosophy. As such, it colored all the various aspects of Royce's early philosophy and particularly his philosophy of religion.

The religious consciousness, according to Royce, is concerned with the nature and possibility of salvation. Before the metaphysics of salvation can be adequately dealt with, however, it is necessary to enter into a discussion of the epistemological problem.

Royce's early theory of knowledge maintains the thesis that every sincere judgment is true for the moment in which it is made, but not necessarily true for other moments. The metaphysical implications of this epistemology are obvious. The world of the present is alone real. The ego itself is a momentary state of consciousness having the capacity, however, to "conceive" a past and a future.

In this latter fact lies the possibility of salvation for the individual. The supreme moral end of human life is "conscious union of every being with the great whole of conscious life." To enter into this life of the Other, says Royce, is religion; to withdraw within oneself is moral starvation.

The uncertainty of our knowledge concerning the ultimate nature of the universe precludes assurance that this goal will ever be attained. The essence of the religious attitude, however, says Royce, is "neither optimism nor pessimism, but simply earnestness to make the world significant."

Leibniz' Theory of Matter. J. A. IRVING.

Leibniz' Theory of Matter can best be understood in terms of a conceivable modification of the Causal Theory of Perception. Let us call sensibilia "confused perceptions" of "physical objects," and in considering the cause of sensibilia let us substitute Leibniz' pre-established harmony for the physico-physiological series. Matter, for Leibniz, was a phenomenon *bene fundatum*: according to the Causal Theory this would mean that Matter is causally related to objective existence in a public world. Leibniz had to show that Matter possesses those very same characteristics which it would possess if it actually were related to its noumenal counterpart, which is a group of confused monads—with the point of view varying continuously between adjacent members of the group.

Leibniz found the corresponding "foundation" in the group of monads of each of the five characteristics of Matter which, on our interpretation, is an element in one of the states of a monad known as a perceptual situation. Further, "confusion" attaches, not to the monad's simple awareness of the bit of Matter, but to the "external referring" associated with that state. *Practically*, we act as if the bit of Matter were an external and independent existent, though *actually* the latter is the group of monads to which the former corresponds and by which it would have been caused, in the absence of pre-established harmony.

Our interpretation enables us (1) to show why Leibniz adopted a phenomenalist theory, (2) to exhibit the significance of his theory in the light of subsequent developments in philosophy and science.

*Some Remarks on Schelling's Philosophy of Nature.*¹ FRITZ MARTI.

"Time as such, as mere *time*, has reality only in abstract thinking" (ccxxi). Mathematically speaking, time as such is only a

¹ For convenient reference, the quotations of this abstract are taken from a few pages of the *Aphorismen über die Naturphilosophie* (of 1806-07), volume VII, pp. 233-241, of the works. The Roman numerals of the aphorisms are given.

parameter dependent on the arbitrarily chosen system of coördinates. Schelling's repeated statement that the real, in time, is the non-temporal (e.g., cexv), seems to point in the direction of relativistic invariant laws.

However, Schelling is not a prophet of modern physics, but a critic of the contingencies in the science of his time. In classic physics, the indifferent void of absolute space, and the indifferent flux of absolute time have no necessary connection with each other, nor with the spatio-temporal position of physical events. These positions are contingent, and the events themselves are merely contingent embodiments of the indifferent generality of classical laws of nature.

Schelling reiterates that the non-temporal essence of what is real is not the abstractly general, but the universally particular (e.g., clxxix, clxxxviii, cexxix). Only in abstraction from universality the particular appears as contingent (cexxx), and this contingency calls for the attempt at substantiation through an infinite regressus of antecedents (cexxvii).

This critical trend in the Philosophy of Nature yields a clue to some of Schelling's accounts of phenomena like gravity and light, accounts which might seem to be mere "deduction" (Fichte, VII, 125; compare Hegel, *Phänomenologie*, ed. Lasson, p. 16). In the very period of *Naturphilosophie*, unmistakable sentences of Schelling's deny the possibility of an *a priori* deduction of the concrete from abstract principles.

BOOK REVIEWS

Platon et l'art de son temps. (Arts plastique.) PIERRE-MAXIME SCHUHL. Paris: Félix Alcan. 1933. 123 pp.

It is a familiar enough fact that Plato's esthetic ideas and standards were, like his political ones, closely related to recent traditions and to experiments of his time. It has long been suspected that his more general metaphysical concepts, the concept of form itself, owed no less to his pre-occupations with the plastic arts of his time than with a Pythagorean pre-occupation with measure and mathematics. M. Schuhl has, in an admirable monograph, treated Plato's attitude toward the art of his time and of his heritage with specific reference to the plastic arts and specific consideration of the way in which Plato's knowledge and taste in these current esthetic productions and controversies partly affected and partly flowed from his moral preferences and his mathematical predispositions. Plato's taste was "conservative" in the fine arts, and this conservatism, that found its political and moral expression in standards of simplicity and

severity, was partly echoed in and partly borrowed from his "archaic" tastes in the fine arts: "En ce qui concerne la sculpture, par exemple, il est évident qu'après Polyclète et Phidias, aucun progrès n'était plus possible dans le même sens; dans un autre ordre le maniérisme du style fleuri indique un certain épuisement; et tandis que de hardis novateurs s'engagent dans des voies inconnues, jusque-là, des archaïsants s'efforcent de revenir à l'idéal de la grande époque où Platon sait si bien nous ramener. . . . Platon n'hésite pas à prendre position dans cette querelle; la sévérité qu'exigent ses idées l'emporte sur sa sensibilité d'artiste, et nous verrons que, si ses rigueurs vont surtout aux 'modernes,' il ne peut approuver pleinement de l'art que certaines formes très particulières" (p. 2).

Plato shows himself to be a partisan of a hieratic art, unchangeable like that of Egypt (p. 19). He is afraid of the arts that encourage emotional instability and deceptive illusion. He retreats from the "irrational influence" of the plastic arts in their more fluid and dynamic aspects, and turns "against the artifice of the illusionists to measure, number, and weight" (p. 37). That measure, beauty, and harmony which are true Beauty are reflected, though at best in an imitation distant and degraded, in those schools of art, dead a half century before Plato, where "archaic" order still ruled.

I. E.

Aristotle's Theory of the Infinite. ABRAHAM EDEL. New York: Privately printed. 1934. 102 pp. \$1.00.

There is first a penetrating and thorough exegesis of the relevant passages in the Corpus, together with an explanation and discussion of the arguments by which Aristotle was led to reject the idea of an actual infinite and to accept that of potential infinite. Then there is a logical elaboration of Aristotle's position with regard to the question in what sense the world as a whole may be called finite or infinite. Finally, the author shows that the developed theory of the infinite ultimately rests on Aristotle's philosophic method of analyzing facts to discover principles and testing the principles by further application to facts, so that the infinite or any other principle is bound to be only a character of the determinate world of experience, not even applicable to the whole. Since this procedure in the present case might be criticized as trying to explain the infinite in terms of the finite and refusing to recognize it as an ultimate category (in the way suggested, for instance, by some Oriental and Christian art), the author examines the fundamental implications of Aristotle's method and concludes that it "can not be proved, except perhaps in the mode in which he sought to establish the principle of contradiction, viz., by showing that its

denial reduces the one denying it to silence. If one prefers silence, however, there is nothing to be said" (p. 102).

It is a pity that this work should be marred by much bad printing, for it makes a significant contribution both to Aristotelian scholarship and to logic.

R. S.

Friends of God: Practical Mystics of the Fourteenth Century.

ANNA GROH SEESHOLTZ. New York: Columbia University Press. 1934. viii + 247 pp.

This book offers a study of the leading German mystics of the fourteenth century, Meister Eckhart the leader of the whole movement, Tauler the moralist, Suso the "agonist," Heinrich von Nördlingen, Rulman Merswin who is identified with "the great friend of God of the Oberland," the writer of *Theologia Germanica*, Ruysbroeck, and a number of others like Thomas à Kempis, Gerson, and Nicholas of Cusa in the next century. The study is strongest on biographical and literary matters, assembling critically the results of much German research in this obscure field. It is less satisfactory in philosophical analysis. Perhaps there is less work to be done in philosophical analysis of these German mystics. At least the author herself comments (p. 213): "Meister Eckhardt and his followers may not have added an original idea to speculative thought." Yet the author places the mystics successfully in their religious and cultural setting, giving effectively the background of the times in which they lived and worked. The author emphasizes the practical side of the mystic way, the fruits of mystical experience in social affairs, the measure of integration and sense of direction that the mystic way affords for the general course of personal and social life. The author's approach to her material is so sympathetic that she succeeds in arousing and holding interest in her narrative.

S. P. L.

Immanuel Kant's Religion within the Limits of Reason Alone.

Translated with an Introduction and Notes by Theodore M. Greene, and Hoyt H. Hudson. Chicago: The Open Court Publishing Company. 1934. lxxxv + 200 pp. \$3.00.

Thanks are certainly due to Professors Greene and Hudson for this most useful edition and excellent translation of Kant's *Religion innerhalb der Grenzen der blossen Vernunft*, a work which throws much light on its author's spirit and especially on his moral philosophy. Professor Greene, who "assumes responsibility for the ideas embodied in the introduction" to the translation, characterizes this writing of Kant's as "worthy of being regarded as a deistic

classic," revealing "an understanding for, and a sympathy with, Christian dogmas far deeper than that commonly found in the deistic literature of the period."

Traditional religionists, however, will find scant appreciation and perhaps little understanding of their positions in these pages of Kant's, it seems to me. Particularly surprising are his very harsh and unperceptive strictures on Judaism as scarcely worthy of being considered a religion, because "God, after all is here merely an earthly regent making absolutely no claims upon, and no appeals to conscience" (pp. 116 ff.).

For Christianity, it is true, Kant does show sympathy, and an understanding at least of the form in which he can tolerate its existence until such time when, through moral and intellectual culture, it shall have become superfluous. He is nearest to Christianity in affirming that man needs not only "a gradual reform in his sensuous nature," but also a "revolution in his cast of mind" or disposition, "a kind of rebirth." He is far from it, however, in his conviction that such regeneration lies in man's power, that "man *himself* must make or have made himself into whatever, in a moral sense, whether good or evil, he is or is to become" (pp. 40 ff.).

It is true that Kant finds a place for an incomprehensible divine grace, but the closing words of his book are that "the right course is not to go from grace to virtue but rather to progress from virtue to pardoning grace." It is true, moreover, that he finds a need for an historic church and a revealed ecclesiastical faith embodied in Scripture. But such a church is not a true church, he adds, unless it advances the cultivation of "pure religious faith" which renders it superfluous.

Kant believes that each individual is intrinsically capable of self-regeneration. But in society men corrupt one another, so that the church as an institution to promote the principles of virtue is needed. This justification of the church seems to overlook the fact that the society of the world can corrupt the church instead of being purified by it. And is it not strange that Kant should overlook this in view of his very low estimate of the "morally worthless," "pseudo-service" of God which he finds generally practiced in the historic churches?

In his Introduction Professor Greene tells us that "after reaching maturity, Kant never attended church services; he even took special pains to avoid them." Perhaps this is connected with the inadequate perception Kant displays in his book of the reasons why people go to church. The first part of Professor Greene's Introduction gives us very interesting information regarding the religious environment of Kant. The middle part is too long occupied, in my

opinion, with a critical restatement of Kant's reflections on the arguments for the existence of God. Probably the most valuable contribution in this connection is the information, as yet little known, that Kant's *Opus Postumum* shows him questioning in his last years the argument for God from the nature of the *summum bonum*, and inclining to the more rigoristic, less hedonistically tinged view that "in the categorical imperative God reveals Himself" (p. lxvi). At the close of his Introduction Professor Greene aptly remarks: "The starry heavens in their incalculable immensity, the inescapable finitude of all human cognition, the paradox of artistic genius, the sublimity of the moral law, the baffling complexity of life and human consciousness—all this awakens in Kant a spirit of reverence." In a discussion of Kant's relation to religion these traits perhaps merit more attention than do his arguments concerning God.

H. L. F.

La pensée et le mouvant. HENRI BERGSON. Paris: Félix Alcan. 1934. 333 pp. 25 francs.

This volume gathers together and in some cases prints for the first time in French a number of Bergson's essays and lectures which have hitherto been relatively inaccessible. Among these are two introductory essays written especially for this collection, the Oxford Lectures of 1911, the *Introduction to Metaphysics*, and his speech on Ravaisson read on the occasion of his accession to Ravaisson's chair in the Académie des Sciences Morales et Politiques. There would seem to be nothing new in the volume—except the historical information about Ravaisson—for students of Bergson, but the old doctrines of the *durée réelle*, intuition, and change, are all defended and sometimes restated in ways which may be unfamiliar to contemporary readers. One of the most striking effects of reading these essays is the impression of close harmony between Bergsonism and the metaphysics of some of the modern physicists. His attacks upon the subject-attribute logic and upon substantialism, in particular, are in accord with much that is nowadays expressed as something novel.

G. B.

Beyond Conscience. T. V. SMITH. New York: McGraw-Hill Book Company, Inc. 1934. xv + 373 pp. \$3.00.

In its conclusion this book is neither startling nor original, namely, that conscience is not a fit judge of itself, though it judges all else. But the manner in which this conclusion is arrived at is both startling and original and makes this treatise one of the most interesting and fertile in contemporary ethical literature. The first

half of the work is devoted to the refutation of those ethical doctrines that regard conscience as a form of knowledge or truth: the theological (deriving the validity of the good from the power of God), the idealistic (equating value and reality), the sociological (lending to conscience the authoritative and altruistic voice of Society), the metaphysical (seeking the fulfilment of conscience in the reality of the state), and the logical (asserting the self-evidence of right and wrong). Professor Smith's critique of these traditional attempts to validate, or, to use his term, "implement" conscience as a reliable instrument of judgment is penetrating as well as unconventional.

The conclusion drawn in Chapter VII, "The Aesthetic Finality of Conscience," is that conscience is thoroughly dynamic, private, and subjective. It is the active aspect of consciousness, pushing for power, judging others in ruthless self-assertion, demanding justice in order that it may dominate. In the next two chapters, the most brilliant and audacious of the book, Professor Smith takes two extreme versions of conscience to prove his point: first, moral solipsism," the doctrine of self-realization, which he expounds in psychoanalytic terms and discovers to be useless as a basis for social order; secondly, moral behaviorism or materialism, which he expounds in Marxian terms and discovers likewise to be socially irresponsible. For, though both approaches to conscience (the subjective and the objective) embody the same moral law (the principle of equality), this principle in the hands of a conscientious integrator-of-his-own-ego or in the hands of a dictatorship of the proletariat is a principle of control and therefore refuses to place the judger on an equality with those he judges, thus revealing that conscience's appeal to equality is merely a device for concealing the struggle for power that goes on incessantly among consciences.

For a genuinely social (as opposed to a conscientious) equalitarianism, Professor Smith falls back (or possibly forward) on the doctrine that the active self is only a partial self and that true society is learning to share what is by nature most private. "The self now unified arises in its unity to subordinate the driving part to the contemplative whole. Consciousness looks upon conscience and finds it good, not merely for what henceforth it can achieve, but for what it is in its own nature, a dynamic datum to a contemplative mind" (p. 353). There are two opposite ways of thus transcending conscience: the Oriental sublimation of the will to power ending in "solipsistic self-absorption" and the Western "experimental equalitarianism without determinable limit as the political and economic stalemate of spirits devoted to power."

H. W. S.

Geist und Sache. Grundlegung der Theorie der Geisteswissenschaften und Klärung des Sinnes Kulturellen Schaffens. WILHELM GREBE. Frankfurt: Moritz Diesterweg. 1934. vii + 226 pp. 7.20 M.

In the last twenty years, the significance of the *Geisteswissenschaften* and of the *geisteswissenschaftliche Methode* has been so much emphasized in Germany, not only in philosophical circles but also in the curricula of higher education, that a reaction was almost inevitable. The book of Grebe is one of the signs of this reaction. *Geist* is according to him the principle of activity (*Tun*), and on that view, historical science is the only *Geisteswissenschaft*, because it alone deals with activity. All the other disciplines usually called *geisteswissenschaftlich*, as the investigations of works of art, of laws, and so on, are directed upon objects and therefore are objective disciplines. On the other hand, history is only a scientific discipline if it objectivizes the spirit; that means that the historical actions do not belong to historical science if experienced in empathetic inner repetition, but only in being taken as objective facts.

When the spirit is limited to activity, it has, according to Grebe, no meaning which is not taken out of the object. Therefore every real connection between the acts has to take into account the object to which the action is directed, and laws of the activities alone are therefore impossible in the realm of *Geisteswissenschaften*.

These fundamental conceptions are applied by Grebe to different problems. He tries, for instance, to solve the problem of antagonism between the two doctrines of the objective spirit (the Hegelian notion of its existence, and the doctrine of its non-existence), by maintaining that the objective spirit is a theoretical assumption like assumptions made in natural science (for instance the assumption of electric fields), and has the same value as those for the explanation of reality.

More than a third of Grebe's book is given to the application of his concepts to problems of culture. In many cases, his answers are determined by the narrowness of his concepts: for example, when he draws the consequence out of his theory that it is impossible to create culture intentionally. In other cases he is entirely right, when he directs his attack against those who overemphasize the *geisteswissenschaftliche* way of analysis, and against those who believe that the purely historical understanding of the problems is sufficient to decide them. Furthermore, he objects to the widespread opinion that the discovery of truth is not to be determined by the investigation of objects but by finding out which type of answer is best adapted to the conditions of the time. But, strangely enough, this rejected attitude of gaining truth by the historical method is

for Grebe identical with liberalism (now despised in Germany), whereas the search for objectivity is identical with National Socialism.

In spite of all the objections which can be made as well against his starting-point as against his results, his analysis provokes reflection. If we apply the historical method (in spite of his opposition to this method) to his own book, we must realize that his book is, in its one-sidedness, an expression of historical necessity. After the high tide of the *geisteswissenschaftliche* method in Germany, reflections on its limits had to come, just as thirty years ago, when the scientific attitude was preponderant, the book of Rickert on the limits of scientific concepts had to come (even if the value of Grebe's book can not be compared with that of Rickert's work).

M. A. G.

Unendlich. Eine Untersuchung zur metaphysischen Wesenheit Gottes auf Grund der Mathematik, Philosophie, Theologie.
ANTON ANTWEILER. (Freiburger Theologische Studien. Heft 38.) Freiburg: Herder & Co. 1934. (St. Louis: B. Herder Book Co. \$1.75.) 200 pp.

The concept of infinity has figured, in senses that border on the equivocal, in the classical discussions of three disciplines that have claimed it as their own, philosophy, theology, and mathematics. Dr. Antweiler's study is a learned attempt to marshal the distinctions and the conclusions of mathematicians and philosophers in their bearing on the theological problem of the being of God. Beginning therefore with an analysis of the broad, popular locutions in which words like "infinite" and "innumerable" occur (in examples taken particularly from philosophers and theologians), he proceeds to a consideration of the possibility of an infinity of finite things or an infinite extension, passing thence, by way of Kant's antinomies, to the infinite number and the infinities of differential calculus and Mengenlehre (confirmation for which he finds in scholastic philosophy), after which the transition from mathematics to philosophy is effected (by way of the Hegelian discussion of the infinite) in the recognition of the "true infinity" evolved from the consideration of the opposition of finite and infinite, and that opposition in turn prepares for the discussion of the infinity of God's being, in terms suggested by the Scriptures, the Church Fathers, Aquinas, Bonaventure, Alexander of Hales, and Duns Scotus. Infinity as extension, infinity as number, infinity as fullness of being is the sequence of broadly supplementing senses which Dr. Antweiler finds in the controversies and theories he uses. The orientation of the entire study to theology permits Dr. Antweiler to solve difficulties and remove

confusions which he finds in the earlier stages of his inquiry, somewhat facetiously at times, but no less frequently with a considerable accretion of insight. But that orientation has also the unfortunate effect of spreading the Platonic coloring, dominant in the theological concept of the infinite, over the theory which survives and the whole course of history which prepared for it. The alternative notion of the infinite, which goes back at least to Aristotle, as consequent to an operation performed on a continuum, has no place in the survey and no effect on its outcome, and even a writer like Thomas Aquinas, who as philosopher adapted the Aristotelian analysis to his uses, appears only as a theologian concerned with the aseity of God. The organization of the voluminous and divergent literature concerned with the concept of the infinite, nonetheless, has the stimulating effect of introducing a unity into a field of discussion in which most of the protagonists have taken pride in a radical diversity.

R. McK.

Science et loi. ABEL REY, F. JONSETH, HENRI MINEUR, A. BERTHOUD, L. CUÉNOT, HENRI PIÉRON, HENRI WALLON, MAURICE HALBWACHS, FRANÇOIS SIMIAND, VICTOR CHAPOT, LUCIEN FEBVRE. Paris: Published for the Centre International de Synthèse, by Félix Alcan. 1934. vi + 228 pp. 15 francs.

A series of lectures with summarized discussions, delivered at the Hôtel de Nevers, May 29 to June 3, 1933. It is always agreeable to hear Frenchmen discoursing on the aspects of the philosophy of science. It can not be said, however, that these present discussions of scientific law in mathematics, mechanics, physical chemistry, biology, psychology, and sociology, and of the place of chance in history, add much that is distinctly novel. There are hints of novelty in the effort to prove mathematics an empirical science, and in the application of Cournot's theory of chance to history.

H. T. C.

The Permanent Horizon: A New Search for Old Truths. LUDWIG LEWISOHN. New York: Harper & Brothers. 1934. 223 pp. \$2.50.

Literary men as well as scientists seem to be finding it hard these days to resist the temptation to turn philosophers or, failing that, evangelists to their erring fellow-men. In the instance before us, it appears that some of the more radical of the younger intellectuals have got under Mr. Lewisohn's skin, and have provoked him to a vehement outburst of disapproval visited impartially upon extremists right and left. Roused to defend the liberal and humanistic spiritual values which he mistakenly believes to depend exclusively

upon the fortunes of the middle-class, the author has constructed his sketchy tract on the ancient formula that the best defense is a good offense. Many will find it easy to join him in his eloquent expressions of disgust; but few will agree that he has succeeded in the far more serious business of establishing an intellectual balance on the basis of an "ultimate reality, some foundation upon which men have built before, and can, if it exists and if it remains, build again." He finds this sought-for foundation for religion, surprisingly enough, in the thought of an "old German metaphysician" named Kant. One fears, however, that the perverse younger intellectuals, if they read Mr. Lewisohn's latest sermons in addition to his novels, will be too much amused by his bold and fervent hymning of bourgeois virtues to join him in a movement back to Kant.

H. A. L.

OTHER NEW BOOKS AND JOURNALS

THE PHILOSOPHICAL REVIEW. Vol. XLIII, 6. Pragmatism and Metaphysics: *C. W. Morris*. The Conception of Law in Statistics and Mechanics: *David Schechtman*. The Contribution of Max Scheler to the Philosophy of Religion: *M. E. Clarke*. Emergent Evolution: An Indian View: *K. R. Srinivasiengar*. Discussion—Meaning without Mind: *V. C. Aldrich*.

Dwelshauvers, G.: *L'Étude de la pensée. Méthodes et résultats*. Paris: Pierre Téqui. 1934. 230 pp. (Lectures delivered at the Institut Catholique de Paris. The first part is a critique of experimental studies of thinking; the second is a discussion of the problems of the unity of the mind with special attention to the theory of spiritual intuition.)

NOTES AND NEWS

We print below the program of the Thirty-fourth Annual Meeting of the Eastern Division of the American Philosophical Association which will be held at New York University, Washington Square, New York City, December 27, 28, and 29, 1934.

THURSDAY, DECEMBER 27

CONCURRENT SESSIONS

2:30 P.M.

Auditorium, Education Building

A Definition of Abstract Systems *Paul Henle*Contradiction *Otis H. Lee*

A Solution of the Paradoxes Which Avoids the Theory

of Types *Frederic B. Fitch*

Introduced by F. S. C. NORTHROP

THE JOURNAL OF PHILOSOPHY

2:30 P.M.

Room 879, Education Building

Toward a New Synthesis in Aesthetic Theory. *Marjorie S. Harris*A Metaphysic of Design without Purpose.... *Merritt H. Moore*Teleology and the Idea of Value..... *Robert C. Baldwin*

8:00 P.M. Informal Smoker

Green Room, East Building

FRIDAY, DECEMBER 28

9:30 A.M.

Auditorium, Education Building

Welcome by CHANCELLOR HARRY WOODBURN CHASE OF NEW
YORK UNIVERSITY.

Symposium: "The Future of Liberalism"

*John Dewey**William Ernest Hocking**William Pepperell Montague*

2:30 P.M.

Auditorium, Education Building

Is Scientific Verification Possible in Philosophy?... *C. J. Ducasse*

The Theory and Practice of the Concrete Universal

*Harold R. Smart*Time and the Absolute..... *Paul Weiss*

4:30 P.M. Tea

Green Room, East Building

5:30 P.M. Meeting of Executive Committee. ☐

7:30 P.M. Annual Association Dinner

Hotel Brevoort

PRESIDENTIAL ADDRESS:

The Philosopher and his Words..... *Warner Fite*

SATURDAY, DECEMBER 29

CONCURRENT SESSIONS

9:30 A.M.

Auditorium, Education Building

The Finite Universe and Scientific Extrapolation

*Benjamin Ginzburg*The Spurious Problem of Evidential Weight.. *Charles A. Baylis*Arguments for the Probable Truth of Realism.. *S. Kerby-Miller*

9:30 A.M.

Room 879, Education Building

Royce's Early Philosophy of Religion..... *George Dykhuiizen*Leibniz' Theory of Matter..... *J. A. Irving*Some Remarks on Schelling's Philosophy of Nature.. *Fritz Marti*

12:15 P.M.

Auditorium, Education Building

ANNUAL BUSINESS MEETING

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The Material World. THEODORE T. LAFFERTY.

Meditation upon Teleology. B. A. G. FULLER.

Can the Law of Contradiction be Stated without Reference to Time?
MARTIN HURST.

Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 20. September 27, 1934.

Thought as Awareness and Thought as Behavior. MARTEN TEN
HOOR.

On the Nature of Reference. PHILIP BLAIR RICE.

Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 21. October 11, 1934.

Monism and Pluralism. ABRAHAM EDEL.

The Strange Case of Modern Psychology. JOHN SOMERVILLE.

Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 22. October 25, 1934.

The Eighth International Congress of Philosophy. ERNEST NAGEL.

Formal and Material Thought. SAMUEL M. THOMPSON.

Book Reviews. Other New Books and Journals. Notes and News.

Volume XXXI. No. 23. November 8, 1934.

Scepticism. W. H. SHELDON.

The Data of a Temporal Perspective. A. USHENKO.

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